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Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

Special Access for Price Cap Local Exchange Carriers	)	WC Docket No. 05-25
AT&T Corporation Petition for Rulemaking to Reform Regulation of Incumbent Local Exchange Carrier Rates for Interstate Special Access Services	)	RM-10593

REPLY COMMENTS OF CENTURYLINK

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EXECUTIVE SUMMARY

For many years, CenturyLink and others have predicted that a mandatory, comprehensive data collection would refute the arguments of those calling for vastly expanded regulation of ILEC DSn-capacity and Ethernet services. The Wireline Competition Bureau's data set is incomplete and already outdated, but – especially when viewed alongside other Commission data – it more than validates these predictions. As CenturyLink and others demonstrated in opening comments, the data set reveal nearly pervasive deployment of competitive facilities, not only in the "central business districts" in which competitors have long (if reluctantly) acknowledged deployment, but in the overwhelming majority of census blocks nationwide. Parties seeking regulatory handouts have not, however, abandoned hope. Instead, they marshal here an array of implausible arguments designed to preserve their discredited narrative of monopoly and market failure, none of which has merit. The Commission should promptly reject their arguments, preserve market-based pricing mechanisms where carriers have been afforded regulatory relief, and extend such relief where an ILEC faces actual or potential competition.

CLECs' Economic Analyses Are Deeply Flawed. Competitors present several third-party analyses designed to demonstrate continued ILEC dominance in the dedicated transmission segment, but these analyses are replete with methodological flaws that render them unreliable at best. *First*, CLEC economists misidentify the relevant product market, excluding various offerings that are substitutes for ILEC special access offerings or that otherwise constrain pricing for those services. As CenturyLink has explained, "best-efforts" cable service and Ethernet-over-hybrid fiber/coax are among the most meaningful direct competitors to ILEC services. Cable providers market their offerings as substitutes, and purchasers treat them as such. Nearly every week brings news of increasing deployment of cable business services and growing cable revenues in this market segment. CenturyLink views cable providers as its primary competitors for the provision of dedicated services in-region, and routinely obtains Ethernet service from cable providers when it acts as a CLEC out-of-region. There is no basis for excluding cable providers from the Commission's competitive analysis, as urged by CLECs here. Likewise, there is no reason to exclude Ethernet-over-Copper services provided by CLECs nationwide over unbundled ILEC loops. Just one provider, XO, now serves about 1 million buildings using this platform, which analysts have called "invaluable" in bringing Ethernet services to locations without fiber facilities. As with cable, CenturyLink itself purchases Ethernet-over-Copper service out-of-region, belying claims that it is not suitable for business use. There also is no rationale for excluding fixed wireless alternatives. CLECs advertise fixed wireless services offering the "speed, performance, and reliability of fiber," and Sprint has announced a transition to fixed wireless for much of its backhaul needs. The Commission should reject claims by these very same entities that fixed wireless is not a feasible substitute for ILEC services. Finally, the Commission must account for offerings by non-traditional players such as Google Fiber, which has begun offering business-grade services. CLEC analyses ignore all of these options, and must be rejected.

Second, the CLECs' competitive analyses also misidentify the relevant geographic market, focusing on individual buildings, locations, or routes. Even the CLECs' principal economic declaration falls short of advocating use of such granular markets. The nation's

antitrust agencies, moreover, reject this approach, calling for use of the largest geographic market in which a provider's prices would be affected by the presence of competitors. As the record makes clear, providers can deploy new fiber facilities to link a new location to existing plant, undermining any claim that the specific location at issue is the most appropriate unit for analysis. Moreover, use of such granular markets would be entirely unadministrable. Instead, the Commission should evaluate markets at the MSA or census block level. Either of these frameworks would comport with the DOJ's and FTC's methodology, and both would be more easily administered.

Third, in addition to excluding certain types of services, CLEC analyses wrongly exclude certain types of competitors. Sprint's experts exclude any provider that is not a traditional ILEC or CLEC. Still worse, several analyses exclude even CLECs, including when the CLEC has deployed fiber *in the very census block at issue*, on the theory that the cost of constructing new facilities "may" render the provision of service to new customers prohibitively costly. In fact, however, CLECs can and do construct such "lateral" facilities, and exercise competitive force in an area even when they do not yet serve a particular location. Further, some CLEC experts attempt to compare providers' market shares while refusing to account for the services that a competitor provides using a third party's facilities. This approach is counter to basic economic theory. And CLECs also focus on the proportion of locations to which CLECs have constructed facilities without accounting for the fact that demand is often concentrated in those specific locations, such that those facilities reach a much higher proportion of would-be customers than it might otherwise seem. The Commission must reject these efforts to portray the marketplace as far less competitive than it is.

Finally, the CLEC analyses seek to establish a causal relationship between competitive entry and lower prices that does not exist, in an effort to demonstrate ILEC market power that simply is not present. In particular, the regression analysis submitted by Professor Jonathan Baker, **[BEGIN HIGHLY CONFIDENTIAL]** [redacted] **[END HIGHLY CONFIDENTIAL]** The Commission must decline to accept those results.

CLECs' Policy Arguments Misunderstand Core Economic Principles. In addition to their experts' methodological errors, the CLECs rely on flawed economic principles and other misconceptions. Their excessive focus on market share misunderstands the nature of "bidding markets," in which a provider can face severe competition and yet attain a high share of the marketplace. In fact, CenturyLink and other ILECs face stiff competition from CLECs, cable providers, fixed wireless providers, and others. Like their competitive analyses, CLECs' advocacy also fails to account sufficiently for the role of potential competition. As CenturyLink and others have explained, the Commission and the courts have long recognized the key role played by potential competition, particularly in light of national policy favoring deployment of next-generation facilities. Even if aggressive rate regulation might be warranted in an industry not subject to such a policy, it is not warranted here, because such regulation would deter

infrastructure deployment by incumbents and competitors alike. Nor do CLECs properly account for the many ways in which they and the ILECs are similarly situated. Like CLECs, ILECs cannot deploy and maintain ubiquitous networks, but must instead rely on the networks of others. Like CLECs, ILECs face significant up-front fixed and sunk costs when they construct new facilities. Like CLECs, ILECs must recoup their costs from their end users. And like CLECs, ILECs must deal with other ILECs at arm's length. The myth that ILECs enjoy a host of unique advantages in the provision of dedicated services is just that. Finally, the CLECs understate or ignore the benefits of deregulated rates. The Commission has long asserted that competition is preferable to regulation in the absence of outright market failure, and that remains true. Competitors in this docket are so focused on their own bottom lines that they neglect to recognize the ways in which market-set rates promote the public interest, and in which regulation is at best a second-best alternative.

There Is No Basis for Re-Regulating or Further Regulating DSn Services. In light of the above, the Commission should reject requests for expansive regulation of DSn services. In particular, it should (i) not reverse any prior grant of pricing flexibility, (ii) expand "Phase II" flexibility to all services/areas now subject to "Phase I" flexibility, (iii) provide additional relief from price caps where one or more actual competitors are providing service in the relevant geographic marketplace, and (iv) provide similar relief when business density or other indicia show that third parties could economically provision service. CLECs advocating expanded rate regulation have not come close to satisfying the high burden they face. The Commission also should refrain from voiding or abrogating existing contracts, which would disrupt the settled reliance interests of not just ILECs but, even more importantly, their customers. Given the competitive choice available in this marketplace, the public interest does not permit, much less compel, this extreme remedy. Moreover, the Commission should reject calls for a presumption of ILEC market power, recognizing that the data collected demonstrates the *absence* of such power. Further, the Commission should refuse to alter the price cap index or reinitialize price cap rates, as these proposals rely on premises regarding ILEC dominance that are not borne out by the facts. And it should decline to adopt new triggers designed to ensure that ILECs remain subject to price caps indefinitely, irrespective of competitive circumstances.

There Is No Basis for Subjecting Ethernet Services to Price Regulation. CLECs also call for the expansion of aggressive price regulation to cover next-generation Ethernet services. There is no basis for such action. The record demonstrates robust competition in the provision of Ethernet services: The marketplace is growing dramatically, and competitors are expanding their positions six times as fast as ILECs. ILECs are now a minority of the top eight Ethernet providers, and no provider enjoys more than one-fifth of the market. Level 3 already has a larger market share than CenturyLink, and is expected to keep growing. Meanwhile, cable providers represent the fastest-growing segment of the Ethernet market, growing their business penetration by more than 50 percent even as ILEC penetration dropped 14 percent. One industry survey revealed that in just one year (2014-2015), CenturyLink's metro Ethernet retail market share within its own legacy ILEC footprint declined from **[BEGIN HIGHLY CONFIDENTIAL]** [redacted] **[END HIGHLY CONFIDENTIAL]** to **[BEGIN HIGHLY CONFIDENTIAL]** [redacted] **[END HIGHLY CONFIDENTIAL]** percent, while the cable market share within CenturyLink's footprint increased from **[BEGIN HIGHLY CONFIDENTIAL]** [redacted] **[END**

HIGHLY CONFIDENTIAL] to **[BEGIN HIGHLY CONFIDENTIAL]** [redacted] **[END HIGHLY CONFIDENTIAL]** percent. It thus is no surprise that Ethernet rates are dropping precipitously, with some offerings seeing compounded annual decreases as high as 30 percent. CLECs ignore actual Ethernet rates, pointing instead to so-called "rack rates," but fail to acknowledge that most purchasers never pay anything close to those charges. Nor is there any merit to claims of a purported "patchwork" of Ethernet regulation: The ILECs whose services are at issue here largely provide Ethernet service subject to rate forbearance, and their competitors never faced rate regulation to begin with. Under these conditions, rate regulation would only starve ILECs of much-needed capital, stalling infrastructure investment and slowing the migration to all-IP networks.

In addition to being unwise, adoption of the CLEC proposals to regulate Ethernet service would be unlawful. The Act does not permit the Commission to reverse its forbearance grants. Section 10 speaks only of forbearance, and affords the agency no authority to "unforbear." Congress adopted the forbearance provision to "end[]" unnecessary regulation, not to *pause* it. Indeed, as the courts have made clear, when the agency "does not deny" a forbearance petition, it is Congress, not the Commission, that makes the decision to grant the petition and "extinguish" the requirements at issue. The Commission lacks the authority to reverse Congress with respect to such action. It therefore lacks authority to take any of the panoply of actions urged by CLECs that would be impossible absent the reversal of prior forbearance grants.

The Commission must also reject as unlawful various other CLEC proposals. Section 251(b)(1) does not authorize the wholesale pricing obligation sought by Windstream. To the contrary, the Commission has held expressly that that provision does not address pricing at all. Nor is there any legal basis for granting Windstream's request for unbundled access to fiber and/or IP-based loop facilities. As the Commission explained long ago, such an unbundling obligation would contradict the Act's pro-deployment premises; this is so with respect to mass-market and enterprise loops alike. And the Commission also should reject Windstream's request that it upend decades of settled precedent by forcing providers to offer separately for resale the transmission component of an integrated information service, which finds no basis in the Act. Finally, in addition to the substantive legal bars to these various CLEC requests, the Commission should acknowledge that it has not afforded parties requisite APA notice for adoption of these proposals. In order to adopt a rule, an agency must first state clearly that it is considering a rule on the specific topic at hand, and make clear what approach it is considering. The notice in this matter did not so much as hint at CLEC proposals regarding (for example) the reversal of prior forbearance grants or the creation of new Section 251 resale mandates.

CenturyLink's Terms and Conditions are Lawful and Procompetitive. Finally, the Commission should reject claims that terms and conditions of the type used in CenturyLink tariffs and contracts are unlawful. CenturyLink has addressed various criticisms of these terms and conditions currently under investigation by the Wireline Competition Bureau, demonstrating that its practices are procompetitive, proconsumer, and lawful. CenturyLink has filed those arguments in the instant dockets, and will similarly cross-file future advocacy relating to the investigation. It does not repeat its arguments on those issues here. The Joint CLEC Commenters also, however, take aim at pure volume discounts, which are not under

investigation. Their criticisms are baseless. The Commission observed decades ago that volume discounts were lawful, reasonable, and non-discriminatory; since then, it has allowed such discounts in a wide variety of contexts. Volume discounts benefit consumers and providers alike, and there is no reason to reverse long-standing precedent here to hold otherwise.

For these reasons, the Commission should reject calls for expansive reregulation of DSn- or higher-capacity facilities, and should begin to put in place a framework that will continue to promote infrastructure investment and deployment in a manner consistent with law, policy, and sound economic principles.

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CenturyLink hereby replies to the opening comments filed by competitive local exchange carriers ("CLECs") and their associated experts in the above-referenced dockets.[1]

INTRODUCTION

For many years, CLECs and other advocates for expansive regulation have contended that incumbent local exchange carriers ("ILECs") are the only providers of dedicated transmission in most locations, and that any data collection would demonstrate their near-universal market domination. CenturyLink and other ILECs, in contrast, have predicted the opposite – that a mandatory, comprehensive data collection would show widespread competitive deployment, refuting the arguments of those calling for vastly broader regulation of ILEC DSn-capacity and Ethernet services. The data is now in, and it shows decisively that the CLECs'

[1] *Special Access for Price Cap Local Exchange Carriers*, Report and Order and Further Notice of Proposed Rulemaking, 27 FCC Rcd 16318 (2012) ("*2012 Special Access Notice*") (subsequent history omitted). Except where noted, the term "CLEC" as used herein refers to parties that filed comments in this docket advocating seeking greater regulation of ILEC special access services, including traditional CLECs and some purchasers of those services, such as Sprint.

claims were flat wrong. The Wireline Competition Bureau's data set is incomplete and already outdated, but – especially when viewed alongside other Commission data – it reveals nearly pervasive competitive facilities, not only in the "central business districts" in which competitors have long (if reluctantly) acknowledged deployment, but also in the overwhelming majority of census blocks nationwide.

Parties seeking regulatory handouts have not abandoned hope, but they have been forced to stake out ever-more-tenuous positions. In response to a record that invalidates their core analytical premises, these proponents of regulation marshal an array of implausible arguments designed to preserve their discredited narrative of monopoly and market failure, none of which has merit. They urge the Commission to ignore entire classes of competitors, claiming that best-efforts cable-based services and Ethernet-over-hybrid fiber/coax ("HFC") cannot compete against ILEC offerings even as these same parties purchase increasing volumes of those very services, contributing to double-digit annual growth in cable business service revenues. They expect the Commission to ignore Ethernet over Copper ("EoC"), even as they serve over a million buildings using such service and tout its ability to bring ultra-fast Ethernet to buildings not served by fiber. And they ask the Commission to ignore fixed wireless competitors, even as Sprint announces that it will now meet much of its backhaul needs using such services and XO advertises fixed wireless service designed specifically to compete against ILEC Ethernet. But even this is not enough: They now contend that the Commission must ignore even the CLECs' own fiber if that fiber is not already in a specific customer's building, no matter how close it might be or how inexpensively the competitor could deploy a "lateral" connecting the new location to its existing network.

These commenters' desperate efforts to obscure the competitive landscape do not end there. In hopes of showing market power where none exists, they also ask the Commission to adopt unlawful and unworkably narrow geographic market definitions; to focus on market share without recognizing that static metric's limitations; to ignore the role of potential competition; and to jettison long-standing Commission policy favoring infrastructure deployment over limitless access to competitors' facilities at rock-bottom rates.

The Commission should promptly reject these arguments. The data speak for themselves, showing pervasive deployment of competitive facilities. The salient figures are set forth in the Initial Econometric Analysis prepared by industry experts from Compass Lexecon, which was submitted in this proceeding last month and referenced in the comments filed by CenturyLink and others.[2] As of 2013, competitors had deployed high-capacity facilities in **[BEGIN HIGHLY CONFIDENTIAL]** [redacted] **[END HIGHLY CONFIDENTIAL]** percent of all census blocks in which an ILEC offered special access services. They had deployed facilities in **[BEGIN HIGHLY CONFIDENTIAL]** [redacted] **[END HIGHLY CONFIDENTIAL]** percent of census blocks in MSAs in which ILECs had been granted "Phase I" pricing flexibility, and in **[BEGIN HIGHLY CONFIDENTIAL]** [redacted] **[END HIGHLY CONFIDENTIAL]** percent of census blocks within "Phase II" MSAs. Even in MSAs with no pricing flexibility, competitors had deployed facilities in **[BEGIN HIGHLY CONFIDENTIAL]** [redacted] **[END HIGHLY**

[2] *See* Mark Israel, Daniel Rubinfeld, and Glenn Woroch, White Paper, Competitive Analysis of the FCC's Special Access Data Collection (filed Jan. 27, 2016) ("Initial Econometric Analysis"). The same experts prepared a further report reiterating these points and specifically responding to the analyses submitted by experts for the CLECs, which was filed in this docket today. *See* Declaration of Mark Israel, Daniel Rubinfeld, and Glenn Woroch (filed Feb. 19, 2016) ("Reply Econometric Analysis").

CONFIDENTIAL] percent of census blocks.[3] While these findings are decisive on their own, they in fact understate competitive deployment: As discussed below and in CenturyLink's opening comments, since 2013, competitive fiber providers have expanded their networks and services even more; meanwhile, cable providers have assumed an even more prominent role in the marketplace, and wireless providers and other new entrants are increasingly challenging ILECs and others for business and wholesale customers nationwide.

The agency cannot simply assume away these indisputable market realities. Nor should the Commission travel down the primrose path toward (re)application of expansive rate regulation to legacy and next-generation transmission offerings. There is no basis whatsoever for any of the endless miscellany of handouts sought by some commenters. The Commission cannot and should not reimpose price caps on services subject to pricing flexibility, adopt new triggers designed to be unachievable, reinitialize rates on the basis of imaginary ILEC windfalls, reverse forbearance with respect to packetized and optical services, discover brand-new wholesale obligations residing in twenty-year-old statutory provisions, unravel decades' worth of precedent regarding the treatment of information services, or pursue any of the other outlandish results urged by CLECs. Instead, the Commission should issue a decision based on the factual record – one that preserves market-based pricing mechanisms where carriers have been afforded regulatory relief, extends such relief where an ILEC faces actual or potential competition, and promotes the continued investment and innovation that have been the hallmarks of the ongoing IP migration.

[3] As the Initial Econometric Analysis explained and as CenturyLink restates below, a competitor with facilities in a census block generally can economically serve any establishment within that census block by extending "laterals" from its existing plant to the new location.

DISCUSSION

I. CLECS' ECONOMIC ANALYSES ARE REPLETE WITH METHODOLOGICAL SHORTCOMINGS

Various CLECs submit expert reports in an attempt to buttress their unsustainably dour view of competition in the provision of high-capacity transmission services. Though those analyses may be voluminous, scrutiny reveals myriad flaws, which yield conclusions that are wholly unreliable or demonstrably incorrect. As a result, the CLECs' reports cast no doubt whatsoever on the intense and growing competition revealed by the Bureau's data set and by the overwhelming additional evidence submitted in this docket.

A. CLECs' Analyses Misidentify the Relevant Product Market.

The comments demonstrate that the market for high-capacity services is highly dynamic, and high-capacity customers have many choices. Despite this showing, several commenters ask the Commission to exclude from its analysis or discount the role of "best-efforts" cable modem offerings, Ethernet-over-HFC, fixed wireless, and other alternatives such as EoC, on the grounds that these services do not impact competition for high-capacity business services.[4] As

[4] *See, e.g.*, Comments of Birch, BT Americas, EarthLink, and Level 3, WC Docket No. 05-25, at 27 (filed Jan. 22, 2016) ("Joint CLEC Comments") at 27 ("[C]able companies' standard best-efforts broadband Internet access services and other HFC-based services are not substitutes for dedicated services."); Comments of Sprint Corp., WC Docket No. 05-25, at 12 (filed Jan. 27, 2016) ("Sprint Comments") ("[T]he Commission should exclude 'best effort' services from the definition of *any* special access product market."); Comments of XO Communications, WC Docket No. 05-25, at 39 (filed Jan. 27, 2016) ("XO Comments") ("[W]hile cable companies may in the long run have the potential to be robust competitors in the Dedicated Services market, they should not be considered rapid entrants."); Comments of Windstream Services, WC Docket No. 05-25, at 23 (filed Jan. 28, 2016) ("Windstream Comments") ("CLECs will continue to represent the main source of competition to ILECs in dedicated services markets, even if cable providers make further inroads in best efforts services markets.").

CenturyLink explains below, all of these services are highly relevant sources of actual *and* potential competition in this market, and the Commission cannot reasonably ignore them.

Best-Efforts Services and Ethernet-over-HFC. CenturyLink and others have explained that competition in the provision of high-capacity services must necessarily account for the services offered by cable providers, including "best-efforts" cable modem services and Ethernet-over-HFC.[5] The Initial Econometric Analysis properly observed that any analysis of "comprehensive competition" in the special access marketplace must account for these services,[6] which are "direct competitors" to ILEC offerings.[7] As CenturyLink and others also explained, National Broadband Map data on cable deployment is a necessary component of this analysis because cable operators have successfully leveraged their networks to rapidly and aggressively target special access customers.[8] As Verizon points out, for many customers, these services "offer a viable substitute to traditional special access and other high-capacity services."[9] And

[5] Comments of CenturyLink, WC Docket No. 05-25, at 17-24 (filed Jan. 28, 2016) ("CenturyLink Comments"); Comments of AT&T Inc., WC Docket No. 05-25, at 13-15 ("AT&T Comments"); USTelecom Comments at 14-23; Comments of Verizon, WC Docket No. 05-25, at 28-40 (filed Jan. 28, 2016) ("Verizon Comments").

[6] Initial Econometric Analysis at 4, 19.

[7] *Id.* at 16.

[8] *See, e.g.*, AT&T Comments at 13; Verizon Comments at 35 ("Cable operators' expansive cable networks provide significant cost advantages, enabling them to extend facilities economically.").

[9] Verizon Comments at 38. Even Professor Jonathan Baker, who generally and mistakenly strives to exclude best-efforts services from the product market, concedes that lower prices and increased bandwidth have made best-efforts broadband "the preferred option" for some customers, resulting in a "growth in demand for best efforts broadband by small retail customers and some mid-sized customers." Baker Decl. ¶ 32. Thus, Professor Baker is not actually writing off best-efforts services as a competitive substitute, he is merely offering his judgment as to who might prefer them and under what circumstances.

cable providers market their best-efforts services as such.[10] As a result of these efforts, Time Warner Cable's network now includes "[n]early 1 million HFC serviceable buildings."[11] Charter, which advertises its "wide-reaching" HFC network as a "low-cost alternative to Optical Ethernet,"[12] stated in 2014 that "Charter Business offers cable modem data service with a minimum speed of 60 Mbps downstream, 4 Mbps upstream to about 97% of its service footprint."[13] In early 2014, Cox was reported to have "a mix of 28,000 fiber lit buildings, 400,000 fiber near-net buildings, and over 300,000 HFC serviceable buildings."[14] When asked to comment on cable's ascendancy in the high-capacity marketplace, Erin Dunne, Director of Research Services for the Vertical Systems Group, remarked:

> Cable is continuing to do so well for a lot of reasons. First of all, they have great penetration via fiber and via HFC deeper into the SMB market than a lot of telcos do. You know, enterprise customers [or] end-user customers don't want to buy DSL. They want to buy something over fiber or over HFC. . . . So we're seeing the cable operators doing a really good job of leveraging their existing cable build, or having the ability to build out strategically to buildings [with enterprise endpoints], and then leverage that

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[10] *See* USTelecom Comments at 21-22; Verizon Comments at 39. As one of CenturyLink's strategic wholesale customers recently told CenturyLink, customers motivated by price see best-efforts cable services as a viable alternative to ILEC Ethernet services. Declaration of Julie Brown and David Williams ¶ 8, attached hereto as Exhibit 1 ("Brown/Williams Decl.").

[11] *Wholesale IP Transit with Direct Access to TWC Broadband Users*, Time Warner Cable Business Class, https://business.timewarnercable.com/solutions/carrier-services/wholesale-ip-transit.html (last visited Feb. 18, 2016).

[12] *Spectrum Business: Ethernet*, Charter Commc'ns, https://business.spectrum.com/content/business-ethernet#coax(last visited Feb. 18, 2016).

[13] *Dwindling DSL Services Give Rise to New Options*, Charter Business, https://business.spectrum.com/mediacontent/pdfs/white-paper-oti-charter-dsl.pdf (last visited Feb. 18, 2016).

[14] CenturyLink Comments at 22.

> HFC network in a way that allows them to interoperate the HFC- and cable-based Ethernet services and extend their footprint.[15]

The cable operators' most recent financial results reinforce these trends. Earlier this month, Comcast Chairman and CEO Brian Roberts reported that Comcast's Business Services unit "has now exceeded a $5 billion revenue run rate while maintaining a growth [rate] of 20%, which is remarkable."[16] For the fourth quarter of 2015, Time Warner Cable stated that its "[b]usiness services kept humming along, recording yet another quarter of more than $100 million of year-over-year revenue growth. That makes 18 quarters in a row."[17] Likewise, Charter reported that small/medium business primary service unit growth "accelerated by 30% in 2015, and 47% year over year in the fourth quarter."[18] The record also demonstrates that each of the major cable operators is vigorously attacking "up-market" opportunities in different ways, and will continue to do so.[19] Indeed, cable operators will become even stronger competitors as

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[15] Erin Dunne, *Can Cable Ride Ethernet to Enterprises?*, Light Reading (Dec. 17, 2015), http://www.lightreading.com/cable/cable-business-services/can-cable-ride-ethernet-to-enterprises/v/d-id/719906 (starting at the 1:36 mark).

[16] Thomson Reuters StreetEvents, *CMCSA – Q4 2015 Comcast Corp. Earnings Call*, Edited Transcript, at 4 (Feb. 3, 2016) ("*Comcast Q4 Earnings*").

[17] Thomson Reuters StreetEvents, *TWC – Q4 2015 Time Warner Cable Inc. Earnings Call*, Edited Transcript, at 3 (Jan. 28, 2016) (quoting Rob Marcus, Chairman & CEO, Time Warner Cable Inc.).

[18] Thomson Reuters StreetEvents, *CHTR – Q4 2015 Charter Communications Inc. Earnings Call*, Edited Transcript, at 3 (Feb. 4, 2016) (quoting Tom Rutledge, President and CEO, Charter Communications Inc.).

[19] *See, e.g.*, USTelecom Comments at 15-17. *See also Comcast Q4 Earnings* at 5 ("We have three engines of growth in Business Services each at a different stage of development – small business, which has healthy market penetration and generates the majority of our revenues; mid-sized business where our market penetration is still less than 10%, but is growing at a higher rate; and our recently announced enterprise division that targets Fortune 1000 companies and is gaining traction with more than 20 large enterprise customers and multiple eight-figure deals already signed. Business Services has strong positive momentum and continues to represent a

they begin to deploy DOCSIS 3.1 systems,[20] which can be used to provide gigabit-level Ethernet speeds without constructing all-fiber loops or undertaking other network plant upgrades.[21]

CenturyLink's own experience confirms that increased cable deployment in the high-capacity market has been a primary driver behind the expanding availability of substitutable wholesale alternatives. As an ILEC that also provides services as a CLEC out of region, CenturyLink is both a major provider and large purchaser of business data services, giving it a broad perspective on the rapidly evolving marketplace for these services. The Declaration of Julie Brown and David Williams, attached as Exhibit 1, describes the competitive challenge posed by cable operators to CenturyLink in its role as a provider of high-capacity services:

> CenturyLink routinely competes against non-cable CLECs, including Integra, Level 3, Windstream and Birch, which compete successfully in the special access marketplace. Nevertheless, CenturyLink views cable providers to be its primary special access competitors, given their expansive networks and rapid growth in business markets. CenturyLink competes against all the major cable companies, including but not limited to Comcast, Cox, Time

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large and attractive growth opportunity for the Company.") (quoting Mike Cavanagh, Senior EVP & CFO, Comcast Corporation); Nav Chandler, IDC, *U.S. Carrier Ethernet Services 2015-2019 Forecast*, at 25 (Mar. 2015) ("Other cable operators and tier 2 carriers in the market are also deploying Ethernet over hybrid fiber coaxial cable to address the growing small to medium-sized enterprise market for Ethernet services. These newer entrants will likely have a greater impact on the market going forward as they expand their portfolios, fine-tune their strategies, offer higher-speed services to large organizations, and create bundles that target the smaller enterprise segment.").

[20] *See, e.g.*, *Comcast Q4 Earnings* at 8 ("Concerning DOCSIS 3.1, as you know, we announced five cities yesterday.… [T]he great thing about DOCSIS 3.1, it's a very efficient way to deliver gigabit speeds and we'll be rolling it out on a widespread basis over the course of the next few years.") (quoting Neil Smit, Senior EVP Comcast Corporation, President and CEO, Comcast Cable).

[21] *See World's First Live DOCSIS 3.1 Gigabit Class Modem Goes Online in Philadelphia*, Comcast Blog (Dec. 22, 2015), http://corporate.comcast.com/comcast-voices/worlds-first-live-docsis-3-1-gigabit-class-modem-goes-online-in-philadelphia.

> Warner Cable, Charter and Bright House. Traditionally, these providers targeted small, single-location customers. But, they have steadily moved up-market to win business customers of all sizes, including multi-location customers and multi-tenant buildings, particularly through their Ethernet-over-fiber and Ethernet-over-HFC offerings, as well as best-efforts services.[22]

As this Declaration makes clear, any suggestion that cable-based services are somehow inferior to, or less suitable than, Ethernet services provided by ILECs and CLECs is misleading. Cable-based services are especially important here given the importance of accounting for potential, as well as actual, competition. Specifically, the Commission must consider "best-efforts" cable modem services *even if* it concludes that such services are not directly comparable to DSn and Ethernet services. As Michael Bugenhagen explains in his Declaration, attached as Exhibit 2,[23] DOCSIS 3.0 systems used to provide best-efforts services can easily be configured to provide Ethernet-over-HFC services if they do not already provide them. Furthermore, according to Mr. Bugenhagen, "a cable operator typically does not need to replace or upgrade its existing DOCSIS 3.0 HC plant to provide Ethernet services."[24] Thus, DOCSIS 3.0 systems pose a competitive threat to ILEC-provisioned special access not only as "actual" competition, but also as "potential" HFC competition.

Furthermore, in its role as a CLEC, CenturyLink obtains Ethernet Local Access from numerous non-ILEC providers to serve locations not on CenturyLink's network, including cable companies. The Reply Declaration of Carla Stewart, attached as Exhibit 1, underscores that cable operators can and do use HFC plant to provide services in direct competition with ILEC-

[22] Brown/Williams Decl. ¶ 7.

[23] Declaration of Michael Bugenhagen, attached hereto as Exhibit 2 ("Bugenhagen Decl.").

[24] Bugenhagen Decl. ¶ 7.

provided DS1s and DS3s, contrary to the claims of some commenters.[25] Indeed, as a buyer of access, CenturyLink has entered into various arrangements with cable companies, and has, over time, increased the volume of HFC-based services it acquires from them because of the value proposition these services offer.[26] As Ms. Stewart explains, "CenturyLink now routinely buys large quantities of fiber-based and HFC-based Ethernet local access services from cable companies from across the country."[27] These cable-based services satisfy CenturyLink's minimum service specifications, which are established through a rigorous internal technical review process.[28] As a result, "CenturyLink is purchasing a growing percentage of wholesale Ethernet services from cable providers."[29] For instance, in December 2015 **[BEGIN HIGHLY CONFIDENTIAL]** [redacted] **[END HIGHLY CONFIDENTIAL]**[30] Moreover, these cable-provided services include varying levels of class of service ("COS") parameters and service level agreements ("SLAs") guaranteeing performance

[25] Reply Declaration of Carla Stewart, attached hereto as Exhibit 3 ("Stewart Reply Decl."). *See, e.g.*, Windstream Comments at 19 ("Coaxial and HFC connections are distinct from the reliable dedicated connections that dedicated services customers usually require.").

[26] *See* Stewart Reply Decl. ¶ 4.

[27] *Id.* ¶ 2.

[28] *Id.* ¶ 5.

[29] *Id.*

[30] *Id.* ¶ 4.

characteristics (such as network availability, jitter, and latency) *regardless* of whether they are provided over Ethernet or HFC.[31]

The foregoing discussion does not mean that the Commission should place undue emphasis on the existence or absence of CoS parameters or SLAs in a given service offering.[32] As both a buyer and seller of dedicated services, CenturyLink knows well that service quality guarantees are not always provided with special access services, including Ethernet services, and, even when present, vary significantly from provider to provider. In fact, CenturyLink does not even offer SLAs for the Metro Ethernet Services it sells to businesses of all sizes (including enterprise customers) in the legacy Qwest ILEC footprint – a fact that eviscerates any contention that cable-based services must offer such features to be considered special access substitutes.[33] Furthermore, while CenturyLink does offer higher CoS with Metro Ethernet service for an additional fee, only **[BEGIN HIGHLY CONFIDENTIAL]** ■ **[END HIGHLY CONFIDENTIAL]** percent of Metro Ethernet circuits are sold with higher CoS.[34] In addition, the service chosen by a given customer depends on the customer's needs and priorities, which vary significantly from customer to customer.[35] To be sure, customers running mission-critical

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[31] *See id.* ¶¶ 6-10; *see also* Bugenhagen Decl. ¶ 5 (noting that specifications developed by CableLabs were designed for business applications that allow cable operators to provide SLAs and Quality of Service over DOCSIS systems).

[32] *See, e.g.*, Windstream Comments at 10-18.

[33] Brown/Williams Decl. ¶ 16. *But see* Verizon Comments at 39 (explaining that Comcast's Ethernet@Home, which is delivered over HFC, is backed by SLAs and is available for a variety of Ethernet services at symmetric bandwidth speeds up to 10 Mbps).

[34] *Id.*

[35] For this reason, the Commission should reject Sprint's ill-defined proposal to account for differences in the capacity of connections in its product market analysis. *See* Sprint Comments at 14-16. As CenturyLink has previously explained, there is no-stand-alone market for high-

applications may seek services with the most stringent SLAs available, or they may choose to pay more for higher CoS parameters if they want to prioritize certain types of traffic carried over their local area networks. In CenturyLink's experience as an access purchaser, however, such customers are not the norm.[36] In any case, cable providers' SLAs for Ethernet services are comparable to those for ILEC Ethernet services, whether provided over fiber or HFC facilities.[37]

Customers who are seeking an Internet connection and motivated primarily by price are more likely to choose a best-efforts service. While these business-grade services may not be subject to stringent SLAs (or any SLAs at all), for some customers that is not important. All customers want reliable services, but many are not willing to pay a premium for service guarantees or traffic prioritization they don't need. Thus, for the vast majority of special access customers, neither SLAs nor higher CoS are necessary to compete successfully.

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capacity services, but rather a wider and market for higher-capacity services provided to enterprise customers through various technologies. *See* Letters from Russell P. Hanser to Marlene H. Dortch, WC Docket No. 14-9 (Feb. 18, 2015). The Initial Econometric Analysis echoed this point:

> Special access transactions exhibit many of the characteristics described in the literature on "bidding markets." Typically, the single supplier that offers the best combination of quality, service, reliability and price that meets the customer's needs will win the customer's business. This method of transaction makes economic sense because the configuration of dedicated services needed by the customer can be specific to its situation, and potential suppliers can also offer differentiated services that are unique to their capabilities.

Initial Econometric Analysis at 8.

[36] In 2015, **[BEGIN HIGHLY CONFIDENTIAL]** ■ **[END HIGHLY CONFIDENTIAL]** percent of the total wholesale Ethernet circuits that CenturyLink purchased had low CoS, and only **[BEGIN HIGHLY CONFIDENTIAL]** ■ **[END HIGHLY CONFIDENTIAL]** percent had high CoS. Stewart Reply Declaration ¶ 7.

[37] *See id.* ¶¶ 8-10.

Ethernet-over-Copper. The Initial Econometric Analysis correctly noted that "a more complete economic analysis of competition" should account for locations where CLECs compete using unbundled network elements ("UNEs"), including unbundled copper loops.[38] Among these options, competitors are using unbundled DS0-capacity copper loops purchased from ILECs at TELRIC rates to provide EoC, with speeds greater than 100 Mbps in certain areas today.[39] Although EoC may be supplanted by new non-ILEC fiber deployments over time, the Commission has found that EoC "enhances the ability of enterprise customers to choose the most cost-effective option for their business or organization."[40] This is so, XO has observed, because "even where fiber to a building has been installed by the ILEC, where there is continued availability of suitable copper, EoC provided by a competitor can be a cost-effective way to offer customers a choice for high bandwidth service at that address."[41]

Over the past several years, competitors have successfully launched and marketed EoC services throughout the country. Last year, XO boasted that it provides EoC in over 565 local

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[38] Initial Econometric Analysis at 22. *See also* AT&T Comments at n.12 ("Drs. Israel, Rubinfeld, and Woroch *excluded* CLEC connections which are identified as relying on unbundled network elements (UNE) or unbundled common loops (UCL). Excluding these CLEC connections renders the analysis conservative, because CLECs still purchase hundreds of thousands of UNEs nationwide and use them to compete against ILEC special access services."); Windstream Comments at 42 (stating that UNEs "are an important last-mile option at locations where a competitive provider does not own facilities").

[39] *See* XO Comments at 8.

[40] *Technology Transitions*, Report and Order, Order on Reconsideration, and Further Notice of Proposed Rulemaking, 30 FCC Rcd 9372, 9445-46 ¶ 134 (2015) ("*Technology Transitions Report and Order*").

[41] Comments of XO Communications on the Tech Transitions Notice of Proposed Rulemaking and on the Petition for Declaratory Ruling of Windstream, GN Docket No. 13-5, at 8-9 (Feb. 5, 2015).

serving offices (up from 350 in 2009), serving more than 950,000 buildings.[42] Birch, Integra, and Level 3 remarked that "competitive carriers have invested in central office upgrades to deliver Ethernet-over-copper services to hundreds of thousands of business customer locations that are not within reach of their fiber networks."[43] According to Frost & Sullivan's most recent Ethernet market update, "2014 witnessed an increased urgency from communication services providers (CSPs) to expand their Ethernet footprint through network-to-network interconnects (E-NNI) and a renewed focus on Ethernet over Copper services."[44] Frost & Sullivan added that "EoC service providers . . . are proving to be invaluable in expanding Ethernet reach to remote, non-fiber, small and midsize business customer locations."[45]

As Ms. Brown and Mr. Williams describe in their attached Declaration, CenturyLink must compete against these CLEC-provided EoC services, which are typically offered by CLECs at "the lowest [price] in the marketplace."[46] To keep or win a customer, CenturyLink has been forced "to reduce its DSn and Ethernet prices repeatedly in its negotiations with wholesale and retail customers."[47] CenturyLink also purchases Ethernet local access from CLECs using UNEs to provide EoC service. As Ms. Stewart explains in her attached Reply Declaration, CenturyLink buys EoC where it is available because it is "frequently the lowest-priced alternative" and these services "are a good fit for many of [CenturyLink's] end user

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[42] *Id.* at 5.

[43] Comments of Birch, Integra, and Level 3, GN Docket No. 13-5, at 30 (filed Feb. 5, 2015).

[44] Frost & Sullivan, *Business Carrier Ethernet Services Market Update, 2015*, at 7 (Sept. 2015).

[45] *Id.* at 35.

[46] Brown/Williams Decl. ¶ 13.

[47] *Id.*

customers."[48] Thus, an accurate competitive analysis must necessarily include EoC and other UNE-based services.

Fixed Wireless. Although ILEC services also face aggressive competition from fixed wireless in the provision of high-capacity transmission, several commenters seek to preclude consideration of fixed wireless in the Commission's analysis. For instance, XO claims that it "does not consider wireless media to have the performance capabilities or sufficient reliability for the provision of its Dedicated Services."[49] This assertion is belied by the *actual* deployment of fixed wireless enterprise services, which has been thoroughly documented by other parties in this proceeding.[50] Curiously, XO's statement is also in stark contrast to how XO represents the capabilities of its *own* "Fixed Wireless Access" service. In the brochure for this product, XO invites customers to "[g]et the speed, performance and reliability of fiber for your communications and network needs, even if your business doesn't have direct fiber access."[51]

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[48] Stewart Reply Decl. ¶ 11.

[49] XO Comments at 25. *See also* Declaration of Michael Chambliss on behalf of XO Communications at 7 ("XO has not found that LMDS or millimeter wave connections have the performance capabilities or network reliability to be a sufficient substitute for wireline Dedicated Services.").

[50] *See* USTelecom Comments at 12-14; Verizon Comments at 46-51; Windstream Declaration at 8 ("Windstream offers fixed wireless in addition to providing wireline telecommunications services to select customers in a subset of its competitive markets. In some instances, this limited fixed wireless offering can substitute for a standalone wired connection.").

[51] XO Communications, *Fixed Wireless Access (Service Overview)* at 1, available for download at http://www.xo.com/network-services/private-line-services/fixed-broadband-wireless-access/. Likewise, in November 2015 XO received an award from *Cloud Computing Magazine* for its Fixed Wireless Access service. In an XO press release announcing the award, Jake Heinz, Senior Vice President of Marketing and Product at XO, stated that: "Customers are looking for alternative connectivity solutions they can rely on when traditional fiber connections may not be available. Our LMDS-based Fixed Wireless Access offers a true and diverse route from fiber connections that satisfies such requirements." Press Release, "XO Communications Receives

XO adds that its service can "deliver a wide range of services" "to business locations at speeds ranging from 10 Mbps to 1 Gbps."[52] XO also touts the "superior reliability" of its fixed wireless product, which "offers all of the performance and reliability of fiber and is backed by carrier-grade Service Level Agreements that in many cases can provide even better up-time than fiber-based network access."[53] The Joint CLEC Commenters also miss the mark when they claim that reliability and building access issues preclude fixed wireless from functioning as a substitute for dedicated services.[54] As Verizon explained in its comments, "[h]istorical problems related to clear lines of sight for fixed wireless services have been overcome, making the inability to receive service a rare exception, particularly in urban settings."[55]

Recent news that Sprint will be transitioning a significant portion of its backhaul from fiber to wireless as part of its "densification and optimization strategy" also illustrates the increasingly important role that wireless is playing in the high-capacity marketplace. According to one report, Sprint is "seeking to reduce its dependency on AT&T's and Verizon's high-speed, fiber-optic cables" and trim its backhaul expenses by utilizing the microwave network it acquired from Clearwire.[56] Sprint is also testing the potential use of its 2.5 gigahertz spectrum for

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2015 Cloud Computing Backup and Disaster Recovery Award" (Nov. 20, 2015), http://www.xo.com/xo-cloud-computing-award/.

[52] *Id.*

[53] *Id.* at 2.

[54] Joint CLEC Comments at 15.

[55] Verizon Comments at 49.

[56] Dawn Chmielewski, *Sprint Finalizes Plan to Trim Network Costs by Up to $1 Billion*, re/code (Jan. 15, 2016), http://recode.net/2016/01/15/sprint-finalizes-plan-to-trim-network-costs-by-up-to-1-billion/. *See also* Thomson Reuters StreetEvents, *S – Q3 2015 Sprint Corp Earnings Call*, Edited Transcript, at 10 (Jan. 26, 2016) ("*Sprint Q3 Earnings*") ("With regard to the question on

backhauling small cells, which the company believes "is a lot more cost efficient and surgical [way] to get to our customers rather than trench fiber."[57] Although Sprint may be on the leading edge of using wireless for backhaul today, "Ericsson predicts that it will become the dominant backhaul by 2020, handling backhaul for 65 percent of cell sites."[58]

Non-Traditional Providers. Any successor regime to the pricing flexibility mechanism must account for actual and potential deployment of high-capacity services by emerging, non-traditional providers of fiber-based services. For instance, Google Fiber has launched an Early Access program for small businesses in Austin, Kansas City, and Provo.[59] For $100 a month small businesses get gigabit speeds, Wi-Fi, firewall protection, online network management and dedicated tech support.[60] Marcelo Vergara, CEO of Propaganda3, a digital production company in Kansas City, applauded Google Fiber for "deliver[ing] to a small business like mine a quality of service that is every bit as good as any large scale enterprise."[61] Google Fiber has indicated

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cost savings for the network, we're looking at a number of opportunities. First and foremost is that opportunity in backhaul, to reduce our backhaul costs. And we are going to be leveraging a hybrid approach of dark fiber and using wireless as a backhaul, as well. As you probably know, we run one of the largest microwave networks in the U.S. today based on the network we acquired from Clearwire.") (quoting John Saw, CTO, Sprint Corporation).

[57] *Sprint Q3 Earnings* at 10.

[58] Colin Gibbs, *Report: Sprint to cut $1 billion by moving towers to government-owned land, backhaul to microwave*, FierceWireless (Jan. 15, 2016), http://www.fiercewireless.com/story/report-sprint-cut-1b-moving-towers-government-owned-land-backhaul-microwave/2016-01-15.

[59] *Google Fiber for Small Business*, Google Fiber, https://fiber.google.com/smallbusiness/ (last visited Feb. 18, 2016) ("*Google Fiber for Small Business*").

[60] *See* JD Sartain, *What's up with Google Fiber?* CIO.com (Nov. 11, 2015), http://www.cio.com/article/3004433/internet-service-providers/whats-up-with-google-fiber.html

[61] *Id.*

that it intends to expand its program as it learns and grows.[62] In addition to Google Fiber, the Commission must also account for actual and potential competition from other non-traditional providers, such as government-owned networks and private utilities.[63] Some of these entities are leveraging excess capacity over private fiber networks to offer high-capacity service to business customers. For instance, FPL FiberNet, which originated from Florida Power & Light's fiber network, now offers a range of dedicated fiber-based services in major metropolitan areas across Florida and Texas.[64] As Ms. Brown and Mr. Williams describe in their attached Declaration, these non-traditional providers are among the various alternatives that CenturyLink's wholesale customers point to during negotiations, and can and do use.[65]

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As the discussion above makes clear, the Commission should reject calls to artificially narrow the scope of its market analysis. Wholesale and business customers obtain services provisioned not only over fiber-optic links, but also over cable plant, unbundled ILEC copper, and wireless spectrum. The result is a competitive marketplace in which providers using a host

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[62] *Google Fiber for Small Business.*

[63] *See, e.g.*, Sean Buckley, *EPB shakes up FTTH market with 10G residential service*, FierceTelecom (Oct. 16, 2015) (describing EPB's launch of multiple-gigabit services for small businesses and larger enterprises in Chattanooga, which is available to every business within EPB's 600-square mile service area), http://www.fiercetelecom.com/story/epb-shakes-ftth-market-10g-residential-service/2015-10-16.

[64] *See, e.g.,* Matt Brunk, *Want Fiber? Ask Your Local Utility Company*, no jitter (Apr. 24, 2014), http://www.nojitter.com/post/240167176/want-fiber-ask-your-local-utility-company; Susan Salisbury, *FPL FiberNet: Little-known subsidiary succeeding big in telecommunications industry*, PalmBeachPost.com (Dec. 22, 2012), http://www.palmbeachpost.com/news/business/fpl-fibernet-little-known-subsidiary-succeeding-in/nTZMs/; FPL FiberNet, Interactive Service Map, http://www.fplfibernet.com/network/map.html (last visited Feb. 18, 2016).

[65] *See* Brown/Williams Decl. ¶ 12.

of technologies vie for customers with disparate needs, serving demand with a variety of products.

B. CLECs' Analysis Misidentify the Relevant Geographic Market.

For a decade, CLECs have predicted that a special access data collection would demonstrate that ILECs are the only providers of special access services in most areas. The data are in, and they show, once and for all, that the CLECs were wrong. As CenturyLink and others detailed in the opening comments, the data show that non-ILECs provide facilities-based dedicated services in virtually all census blocks. Faced with this reality, the CLECs now argue that the Commission needs to evaluate competition on an extremely granular (*e.g.*, building-by-building or route-by-route) basis. These commenters' underlying agenda is clear: They seek to narrow the geographical focus as much as possible and thus portray the market as either being a monopoly or having a minimal number of competing providers. Their proposals, however, are infeasible and inconsistent with economic theory. The Commission should reject them, relying instead on an alternative such as MSAs or wire centers as the relevant geographic market.

CLECs offer surprisingly little support for their exceedingly granular proposals. Several commenters rely on a declaration by economist Jonathan B. Baker, who they claim advocates using "'service to each customer location served by a dedicated connection" as "the relevant geographic market."[66] However, they go a step beyond the path trod by Professor Baker, who did not conclude that the specific location was *the* relevant geographic market; rather, Baker concludes that a particular location "is appropriately defined as a geographic market," while

[66] Joint CLEC Comments at 19 (quoting Declaration of Jonathan B. Baker ("Baker Declaration") at ¶ 35).

noting that "defining individual customer locations as geographic markets does not rule out also defining broader geographic markets."[67] It is well established that in defining the relevant market in an antitrust analysis, one starts with the smallest geographic market *and then proceeds to larger market definitions* until the relevant geographic market is identified.[68] Thus, individual customer locations are the *starting* point for the analysis, not the endpoint for identifying the relevant market. The goal is to arrive at the entire geographic area where the infamous hypothetical monopolist would be able to raise prices.[69]

The simple fact is that to be able to compete for special access between two locations, a carrier need not have facilities in place directly linking those locations; it only needs to be able to deploy facilities readily between them. Thus, in the case of special access, the hypothetical monopolist would be constrained in its ability to raise prices not only by a competitor present at both endpoints, but by a competitor with the practical ability to serve those endpoints. And as a practical matter, that means a competitor who serves the general area where the customer endpoints are located, and can readily extend facilities to the relevant locations. In the case of special access, that test is easily met in the parts of MSAs most likely to house business customers. CLECs that already serve a large number of points in the densest business areas of an

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[67] Baker Decl. ¶ 35.

[68] *See* FTC and DOJ, *Commentary on the Horizontal Merger Guidelines*, at 5-6 (2006) ("Definition of the relevant geographic market is undertaken in much the same way as product market definition—by identifying the narrowest possible market and then broadening it by iteratively adding the next-best substitutes."), http://www.justice.gov/atr/file/801216/download.

[69] *Id.* ("Thus, for geographic market definition, the Agencies begin with the area(s) in which the merging firms compete respecting each relevant product, and extend the boundaries of those areas until an area is determined within which a hypothetical monopolist would raise prices by at least a small but significant and non-transitory amount.").

MSA are already sufficiently close to the most likely potential customer locations to be deemed competitors at those locations whether or not they have existing facilities at the endpoints. Their sunk costs in existing facilities in the MSA represent the bulk of the cost involved in providing service, thus giving them incentives to compete for additional customers at additional locations in the MSA that can be served, in part, using those existing facilities.[70] As a result, the ILEC's offerings are competitively constrained by the presence of competitors with investments in facilities in the MSA.[71] Moreover, "deployment of special access facilities by competitive providers has dramatically expanded in the past several years. Hence, the mere fact that a buyer may have chosen to purchase services from a particular supplier in the past, as reflected in market shares, does not mean that the chosen supplier is not constrained by competition."[72]

Whether the relevant geographic market is defined as the entire MSA or just the portion or portions of the MSA containing the densest population of businesses matters little, because those concentrated areas of business locations are the key to the competitive state for business services in the MSA. If there are multiple competitors present in the areas where businesses require dedicated transmission services, that defines the competitive state of the MSA for business services, and the presence or absence of competition in the outlying areas of the MSA does not affect the hypothetical monopolist's ability to raise prices for business services in the MSA to any significant extent.

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[70] *See* Initial Econometric Analysis at 9.

[71] *See id.*

[72] *Id.* at 10.

Apart from the CLECs' misidentification of the relevant market as a matter of antitrust law, a building-by-building or location-by-location geographic market framework would not be administratively feasible. By the CLECs' logic, a small city with 1000 buildings or business locations would have not just 1000 relevant geographic markets, but also 499,500 pairings of locations, each of which would potentially be subject to analysis as a separate relevant geographic market, and companies with multiple locations to be tied together would inflate the number of relevant markets even *further*. Analysis of competition at thus highly granular level also is subject to a great deal of uncertainty. The competitiveness of service provided to a specific building or route will change dramatically each time an additional competitor deploys last-mile (or last-meter) facilities or removes facilities no longer needed. Every new customer sign-up would change the competitive state of one narrow geographic market. It would therefore be impossible to apply the CLECs' framework on a going-forward basis. Presumably, the Commission does not plan to gather data continuously at the lowest, most granular level information about every entry into or exit from literally millions or billions of "markets" – nor should it. Moreover, the Commission clearly cannot rely on self-certification regarding the status of competition by one competitor who does not have access to the competitive plans of all of its potential competitors. Disputes over the level of competition between particular points will be inescapable, unnecessarily consuming scarce Commission resources, not to mention the resources of providers who could better devote their efforts to innovation and deployment.

For these legal and practical reasons, the Commission should instead utilize a broader geographic market – for example, the MSA approach used in the *Pricing Flexibility Order* or a framework based on wire centers. As several commenters have argued, MSAs would be a more appropriate measure of the relevant geographic market for special access services than individual

customer locations. As Verizon has observed, "facilities-based competitors typically enter markets at the level of a metropolitan area and not in small geographic areas like an individual office building or city block."[73] The fact that demand is distributed unevenly across an MSA does not justify moving down to a more granular geographic market. Even if it were true that competitive fiber only existed in the "relatively compact and dense sectors" of MSAs[74] – a claim belied by the data collection – those areas are the ones that matter most, because "the densest areas in a city" are "where most commercial customers are located."[75] Moreover, as the Initial Econometric Analysis explained: "[T]he geographic range of the competition posed by a service provider is not limited to the specific locations of active circuits at a particular point in time. . . . It is relatively easy for a provider to expand its capacity to serve customers within the route structure of its existing network."[76] Thus, MSAs are appropriate for use as the relevant geographical market.

In the alternative, the Commission should consider use of the wire center as the relevant geographic market. Wire centers are more granular than MSAs, and their use here would address the concerns the Commission expressed regarding MSAs in the 2012 *Pricing Flexibility Suspension Order*. The Commission there held that business demand, and thus competitive conditions, can vary significantly within an MSA, and areas with higher demand are more

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[73] Verizon Comments at 20.

[74] XO Comments at 33.

[75] *Id.* at 32. *See also* Initial Econometric Analysis at 11 ("In most instances, . . . there are multiple competitors in census blocks and they tend to be located where the demand for special access exists within the census block, which means that competitors can generally reach all or most demand within the census block.").

[76] Initial Econometric Analysis at 10.

supportive of competition and more attractive to potential entrants than low demand areas.[77] There are "dense pockets of business establishments . . . as well as areas in which business establishments are few and far between."[78] The dense pockets of business establishments are where the vast majority of business customer locations are, and where the competing providers of business telecommunications services are located. As a practical matter, they represent the state of competition in the MSA at large, because that is where the MSA's businesses are found. However, it is also possible to consider these concentrated pockets of business customers on a more granular basis than the MSA.[79] In addition, the Commission similarly relied on wire centers to set triggers for unbundled access to DS1/DS3 loops and transport elements in the *Triennial Review Remand Order*, making their use here both logical and reasonable.[80]

Finally, if the Commission *does* adopt a location-by-location or route-by-route approach, or some other similar granular definition of the relevant geographic market, it must acknowledge that *any* carrier with a presence at a given geographic market will be subject to the same regulatory constraints as apply to any other carrier. The Title II provisions governing this proceeding – Sections 201 through 205 of the Act – apply to *any* entity insofar as it provides a common carrier service. Thus, if a requirement's premise is that it is appropriate to regulate the sole provider (or one of two providers) in the geographic market, then that rationale holds

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[77] *Special Access for Price Cap Local Exchange Carriers*, Report and Order, 27 FCC Rcd 10557, 10574-75 ¶ 37 (2012) ("*Pricing Flexibility Suspension Order*").

[78] *Id.* at 10575 ¶ 38.

[79] To be sure, this approach would raise administrability concerns of its own. CenturyLink urges the Commission to adopt a further notice seeking comment on ILECs' ability to configure their internal systems to accommodate other frameworks before effectuating such a regime.

[80] *Unbundled Access to Network Elements*, Order on Remand, 20 FCC Rcd 2533, 2558-59 ¶ 43 (2005).

whether the sole provider is an ILEC, a cable provider, a CLEC, a fixed wireless provider, or another entity. **[BEGIN HIGHLY CONFIDENTIAL]** [redacted] **[END HIGHLY CONFIDENTIAL]**.[81]

C. CLECs' Analyses Wrongly Exclude Meaningful Competitors.

In addition to mischaracterizing the relevant product and geographic markets, the CLECs' experts seek to winnow down the roster of competitors even further by erasing entire categories of providers from the marketplace – sometimes without any clear basis for doing so. For instance, one pair of Sprint's experts, Zarakas and Gately, purport to "apply the most comprehensive datasets possible in answering questions concerning market shares,"[82] but then confess that they *only* calculated traditional CLEC and ILEC market shares, excluding other providers of dedicated high-capacity services.[83] In fact, their declaration does not even *mention* cable or wireless competitors, nor does it bother to explain why those categories were omitted. Sprint's other pair of experts, Besen and Mitchell, likewise barely mention cable competition, focusing their analysis – which is flawed in other respects, as discussed below – on CLECs.[84] As discussed above, there is no basis on which to exclude the important and growing competitive forces posed by cable and fixed wireless providers from any assessment of market share. Indeed,

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[81] Declaration of Stanley M. Besen and Bridger M. Mitchell ¶ 27 & Table 2 (Jan. 27, 2016), attached to Sprint Comments ("Besen & Mitchell Decl."); *see also* Ad Hoc Telecommunications Users Committee Comments, WC Docket No. 05-25, Declaration of Susan Gately ¶ 4 (filed Jan. 28, 2016).

[82] Declaration of William P. Zarakas and Susan M. Gately ¶ 9 (Jan. 27, 2016), attached to Sprint Comments ("Zarakas & Gately Decl.").

[83] Zarakas & Gately Decl. ¶ 3.

[84] *See, e.g.*, Besen & Mitchell Decl. ¶ 9.

cable operators would be quite surprised (if not dismayed) to learn that their presence in the high-capacity business marketplace is so inconsequential, particularly given their burgeoning revenues in the business service market.[85] Given the choices made by its experts, Sprint's conclusion asserting a lack of competition is not only unreliable but seemingly preordained: If one assumes away all competitors, one will of course determine that no competition exists.[86]

Other analyses go Sprint one better, excluding even some *CLECs* from their assessments of the marketplace, on the basis of exaggerated deployment obstacles that allegedly compromise competitors' ability to compete. These efforts to downplay CLEC competition violate the bedrock principle that any responsible economic analysis take into account both actual *and potential* competition, as discussed below and in CenturyLink's opening comments.[87] They also are counter-factual. Professor Baker, for instance, speculates without any apparent basis that the need for a local permit to construct laterals – among other routine build-out prerequisites that apply to ILECs and CLECs alike – "may make entry prohibitively costly."[88] XO, for its part, asserts that it is "expensive" to build laterals from existing fiber routes to new service locations[89] – although XO nonetheless does build laterals, recovers the construction costs from its customers,[90] and boasts that it is able "to reach over 10 million business locations" as a result.[91] XO's ease of entry is apparent from its steady climb up the list of top Ethernet providers.[92]

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[85] *See generally* CenturyLink Comments at 17-25.

[86] Zarakas & Gately Decl. ¶ 4; Besen & Mitchell Decl. ¶ 9.

[87] *See infra* Section II.B; *see also* CenturyLink Comments at 35-37.

[88] Baker Decl. ¶ 97.

[89] XO Comments at i, 5.

[90] Kuzmanovski Decl. ¶ 22.

Other CLECs have also proven themselves ready, willing, and able to deploy lateral facilities. In fact, Windstream's CEO is on record as touting his company's plans to build laterals off of existing network rings as an opportunity to *save* costs – $1 billion by his estimation – and reach more customers.[93] Just this week, Windstream announced that it had completed that process in Charlotte, North Carolina, making it "one of the best-connected cities in the country."[94] Windstream plans to build on that success with further deployments this year in other states.[95]

Windstream's deployment corroborates the conclusion (rendered in both the Initial Econometric Analysis and the Reply Econometric Analysis) that a competitor with facilities in a census block generally can economically serve any establishment within that census block by

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[91] Ethernet Private Line, *XO Communications*, http://www.xo.com/network-services/ethernet-services/private-line/ (last visited Dec. 17, 2015).

[92] *Compare 2014 U.S. Carrier Ethernet Leaderboard,* Vertical Systems Group (Feb. 19, 2015), http://www.verticalsystems.com/vsglb/2014-u-s-carrier-ethernet-leaderboard/, *with Mid-Year 2015 U.S. Carrier Ethernet Leaderboard*, Vertical Systems Group (Aug. 24, 2015), http://www.verticalsystems.com/vsglb/mid-year-2015-u-s-carrier-ethernet-leaderboard/.

[93] Sean Buckley, *Windstream's Thomas: We see an opportunity to reduce $1B in special access spending*, FierceTelecom (Sept. 18, 2015), http://www.fiercetelecom.com/story/windstreams-thomas-we-see-opportunity-reduce-1b-special-access-spending/2015-09-18.

[94] Katherine Peralta, *Windstream expands fiber network in Charlotte*, Charlotte Observer, Feb. 16, 2016 http://www.charlotteobserver.com/news/business/article60647976.html.

[95] Sean Buckley, *Windstream expands Charlotte metro fiber network, plans further builds in Tennessee, Virginia*, FierceTelecom (Feb. 17, 2016), http://www.fiercetelecom.com/story/windstream-expands-charlotte-metro-fiber-network-plans-further-builds-tenne/2016-02-17?utm_medium=nl&utm_source=internal&mkt_tok=3RkMMJWWfF9wsRokuq%252FBdu%252FhmjTEU5z14uQkXqO1lMI%252F0ER3fOvrPUfGjI4FSsZnMa%252BTFAwTG5toziV8R7LMKM1ty9MQWxTk.

extending laterals from its existing plant to the new location.[96] In fact, as the Reply Econometric Analysis points out, "[b]ecause more often than not a census block contains a single building, a competitive provider with facilities somewhere in a census block is very likely able to serve all or most of the special access demand within the census block."[97] The CLECs' own declarations confirm that in areas where they have deployed fiber facilities, CLECs will compete for customers in nearby buildings and deploy connections to those buildings where they win customers.[98] These concessions bear out DOJ's finding that special access competition from traditional CLECs constrains ILEC prices in any building that is sufficiently near (but not necessarily already connected to) their competitive sunk network facilities.[99]

Meanwhile, Sprint's other pair of experts, Besen and Mitchell, improperly dismiss from consideration any CLEC that has deployed fiber in a particular census block but that is not currently serving customers there, because, for example, it does not operate an interconnection point within that census block.[100] As just noted, CLECs and ILECs alike both can and do construct laterals connecting their existing networks to new locations. Thus, the presence of

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[96] CenturyLink Comments at 27-28 (citing Initial Econometric Analysis at 10); Reply Econometric Analysis at ¶¶ 45-47.

[97] Reply Econometric Analysis at ¶ 10.

[98] *Id.* at 22 (citing Kuzmanovski Decl. ¶¶ 22, 24 (XO) and Deem-Derstine-Kozlowski-Nichols-Scattereggia-Smith Decl. ¶ 51 (Windstream)).

[99] *See, e.g.*, *AT&T, Inc. & BellSouth Corp.*, Memorandum Opinion and Order, 22 FCC Rcd 5662, 5682-83 ¶¶ 41-42 & nn.111-14, 5685 ¶ 46 (2007) (describing and adopting "screens" employed by DOJ to determine whether a building could be served by alternative facilities, which recognize that competitors with facilities near a building can and do compete for customers in that building).

[100] Besen & Mitchell Decl. ¶ 32 (claiming that "counts of the number of CLECs that serve any purchasers using their own facilities are better measures of competitiveness than are counts based on whether a CLEC has facilities in an area).

competitive fiber in a census block is highly relevant to the competitive landscape, even if the CLEC at issue does not currently serve a location within the block. Moreover, the current lack of an interconnection point does not preclude competition forevermore. Critically, Besen and Mitchell are silent on whether installing an interconnection point is particularly burdensome or otherwise unachievable. And in CenturyLink's experience, it is neither: If there is sufficient demand, carriers will naturally install interconnection points nearby when they deploy fiber, and even if they do not, it is still possible to add new splice points.

Besen and Mitchell seek to constrict the competitive landscape even further by concocting a "market share" analyses based on revenue and bandwidth, and then diluting the results more by attributing to CLECs only sales made using their own facilities (despite the fact, discussed above, that many CLECs offer competitive services using UNEs or comparable wholesale arrangements).[101] Again, these strained efforts to minimize CLEC competition are unpersuasive. As the Reply Econometric Analysis describes in greater detail, the market share figures relied upon by Besen and Mitchell ignore nearby fiber facilities, despite evidence (including from the CLECs themselves) that in areas where competitors have deployed fiber facilities, the competitors will compete for customers in nearby buildings and deploy connections to those buildings where they win customers – reflective of the "bidding market" that characterizes the special access marketplace.[102] In addition, and consistent with the collective blind eye that CLECs turn toward cable companies in this context, the static market shares relied upon by Besen and Mitchell omit all competition from cable companies – both their Ethernet and

[101] Besen & Mitchell Decl. ¶ 35.

[102] Reply Econometric Analysis at ¶¶ 44-50.

best-efforts services – notwithstanding abundant evidence that they compete head-to-head with ILECs as well as CLECs.[103]

These various efforts to minimize the extent of CLEC competition in the high-capacity business marketplace cannot be reconciled with the CLECs' representations in their marketing materials and statements to investors – which, as CenturyLink has described, regularly boast of widespread (if not ubiquitous) nationwide deployments without any hint of the purported challenges referenced in their expert reports in this docket.[104] Nor are the CLECs' claims here compatible with the data collected in this proceeding, which confirm that as of 2013, competitors had deployed high-capacity facilities on a nearly ubiquitous nationwide basis.[105] Accordingly, any economic analysis that does not take full account of all current and potential competitive options is incomplete and unreliable.

D. CLECs' Analyses Ignore the Concentration of Demand In Particular Locations.

Competitors also highlight what they characterize as the very low proportion of locations to which CLECs have deployed facilities, but nowhere recognize the high concentration of demand in those areas.[106] Demand for high-capacity business services may well not be uniform at all locations within a census block, or even within a particular location.[107] The fact that competitors have deployed to select locations within a census block merely evinces the unremarkable fact that demand at those locations is particularly high. As the Initial Econometric

[103] *Id.* at ¶¶ 54-61.

[104] CenturyLink Comments at 15-17 (cataloging a representative sample).

[105] *See, e.g.*, *id.* at 2 (citing figures).

[106] *See, e.g.*, Besen & Mitchell ¶ 28.

[107] *See, e.g.*, Reply Econometric Analysis at ¶ 34-36.

Analysis explained and the Reply Econometric Analysis reiterates, greater entry takes place where the demand is the greatest.[108] The data thus unsurprisingly show that "competitors have deployed facilities in nearly all of the census blocks where there is special access demand," and that "these census blocks contain the preponderance of special access connections and business establishments."[109]

E. CLECs' Regression Analysis Fails to Show the Asserted Relationship Between Prices and Competitive Entry.

Finally, several CLECs cite a regression analysis conducted by Professor Baker to try to show that ILECs are able to exercise market power.[110] But Professor Baker's regression analysis – which purports to show **[BEGIN HIGHLY CONFIDENTIAL]** [redacted] **[END HIGHLY CONFIDENTIAL]** – contains a number of flaws that undermine his already-dubious claim that effective competition requires at least four facilities-based providers in a location.[111]

The problems with this analysis are explained in greater detail in the Reply Econometric Analysis;[112] CenturyLink highlights some of the key points here. First, Dr. Baker's cause-and-effect determination is backwards: It is not that **[BEGIN HIGHLY CONFIDENTIAL]** [redacted] **[END HIGHLY**

[108] *See, e.g.*, *id.* at ¶ 34 (finding that CLECs "focus their initial deployments in urban centers where costs are low (e.g., zero or low mileage) and demand is significant" and that "larger buildings tend to have more competitive provider connections").

[109] Initial Econometric Analysis at 21; *see also id.* at ¶ 7.

[110] *See, e.g.*, Windstream Comments at 47; Joint CLEC Commenters at 49.

[111] Baker Decl. ¶ 53.

[112] Reply Econometric Analysis at ¶¶ 18-42.

CONFIDENTIAL]. As the Reply Econometric Analysis states, entry is a response to the demand and cost conditions that prevail in the specific geographic market, and neglecting those conditions will bias the regression coefficient estimates toward showing **[BEGIN HIGHLY CONFIDENTIAL]** [redacted] **[END HIGHLY CONFIDENTIAL]**[113] Professor Baker's failure to take these factors into account is a fundamental flaw in his regression analysis, rendering it biased and unreliable.[114]

In addition, the Reply Econometric Analysis observes that, far from yielding any sort of uniform results, Professor Baker's "key tables are actually checkerboards of positive, negative, and insignificant results" – for instance, 5 of the 13 regression models submitted in Table 2 of his report show no relationship between increased entry and price, while 3 actually refute his hypothesis about that relationship.[115] In other words, the results of his analysis not only do not

[113] *Id.* at ¶ 13.

[114] *Id.* at ¶ 34.

[115] *Id.* at ¶ 13. *See also id.* at ¶ 23 ("[O]f the 91 regression coefficients reported in the table about 55 percent are not statistically significant, which means that they do not provide support for Professor Baker's hypothesis that ILEC prices decrease as more CLECs connect to a building. Moreover, a large portion of the results that were statistically significant, showed a positive effect, meaning that more competitors resulted in higher prices, which refutes Prof. Baker's conclusions.").

support his conclusion, they often contradict it.[116] For example, Baker's results show that average prices in a building rise when a third provider enters (and that those price increases are attributable to the "competitive" providers, not to the ILEC).[117]

The problems continue to mount. The Reply Econometric Analysis further points out that Professor Baker's regression is based on incorrect prices – in fact, the pricing data relied upon by the regression is missing pricing data for about **[BEGIN HIGHLY CONFIDENTIAL]** ▀▀ **[END HIGHLY CONFIDENTIAL]** of the locations where there are special access connections – *and* incorrect counts of building connections by competitors – which exclude all connections to buildings by cable companies (including cable fiber and Ethernet services and cable best-efforts services).[118] The cumulative effect of these and other problems is that Professor Baker's regression analysis simply cannot be used to draw any reliable conclusions about competition in this marketplace.

II. CLECS' POLICY ARGUMENTS MISUNDERSTAND CORE ECONOMIC PRINCIPLES AND THE ISSUES PRESENTED IN THIS PROCEEDING

The various methodological flaws described above are no accident, as they flow from the CLECs' misguided views of the core precepts of competitive analysis. Unmoored from the key economic principles that should be guiding their arguments, the CLECs paint a portrait of the marketplace that defies both doctrine and reality.

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[116] *Id.* at ¶ 22.

[117] *Id.* at ¶ 25.

[118] *Id.* at ¶ 28.

A. CLECs' Focus on Market Share Defies Settled Tenets of Competitive Analysis.

CLECs' arguments about market share and concentration, including their use of the Herfindahl-Hirschman Index ("HHI"),[119] miss the mark because they fail to acknowledge the dynamics of "bidding markets" such as the special access market, and also ignore the Commission's interest in creating incentives for facilities deployment.

As the Reply Econometric Analysis points out, competitors' efforts to demonstrate market power by analyzing concentration of market share are fundamentally flawed.[120] "[S]tatic, historical market share analyses . . . are of limited value in determining the competitiveness of special access markets because they fail to account for how competition actually occurs in the marketplace and understate the true extent of competition."[121] Indeed, the antitrust agencies themselves caution against analyzing markets based solely on market share. The Horizontal Merger Guidelines regard market concentration as merely a threshold screen flagging a need to "examine whether other competitive factors confirm, reinforce, or counteract the potentially harmful effects of increased concentration."[122] As the Guidelines explain: "Market shares may not fully reflect the competitive significance of firms in the market or the impact of a merger. They are used in conjunction with other evidence of competitive effects."[123] As a result, the

[119] *See, e.g.*, Sprint Comments at 34-39.

[120] Reply Econometric Analysis at ¶¶ 43-63.

[121] *Id.* at 21.

[122] Horizontal Merger Guidelines at 19

[123] *Id.* at 18.

Guidelines indicate that high HHIs, or significant increases in HHIs as a result of a merger, are merely triggers for additional data collection and analysis.[124]

In this case, the necessary further analysis demonstrates that the incumbents' pricing and other market behavior are significantly constrained, minimizing their market power. As the Initial Econometric Analysis described, markets such as the dedicated transmission market, where competitors bid for customers' business through RFPs or other auction-like mechanisms, often result in high market concentrations *even when market power is lacking*.[125] This is because the winning bidder receives all of the customer's business for the term of the contract, even though the winning bidder's pricing was constrained by the bidding process that led to the award. Likewise, the winning bidder will still be constrained during the *next* bidding process, which will occur at the end of the contract term (and in other bidding processes for other potential customers). Thus, when they analyze mergers, the expert antitrust agencies focus not on HHIs, but rather on the importance of customers' ability to play one bidder off of another (*i.e.*, on the existence of a second competitor).[126]

Even if reliance on HHI scores were appropriate here (and it is not, as explained above), there are industry-specific policy reasons why the Commission must avoid the competitors' misguided invitations to find market power where there is none. As the Commission has recognized, its regulatory regime must take account of the regulations' impact on carriers'

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[124] *Id.* at 19.

[125] Initial Econometric Analysis at 9.

[126] *See* Horizontal Merger Guidelines at 22.

investment and deployment decisions.[127] The Commission's special access rules should create incentives for competitors to deploy their own facilities, not rely on inexpensive price-regulated ILEC facilities. Thus, it is crucially important for the Commission carefully to consider the data and recognize the incumbents' lack of market power. As a result, special access pricing relief is warranted.

B. CLECs Fail to Recognize the Role of Potential Competition in the Market.

CLEC commenters give insufficient weight to another critical tenet of competitive analysis – the importance of accounting for *potential* entry in addition to actual competition. As CenturyLink has explained, the Commission, the courts, and the expert antitrust agencies all agree on the need to include prospective competitors in any robust competitive analysis, particularly in light of national policy favoring deployment of next-generation facilities.[128] In fact, the Commission has properly acknowledged that its "forward-looking" evaluation in this proceeding must do so.[129]

Notwithstanding the Commission's recognition here of this foundational economic principle, some CLECs (such as Windstream) omit *any* mention of potential competition – focusing instead on outdated (and blurred) snapshots of the marketplace that fail to portray its current dynamism – while others (such as the Joint CLEC Commenters[130]) give some lip service to the relevance of prospective competitors but then strive to bump them out of the frame by

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[127] *See, e.g.*, *Petition of Qwest Corp. for Forbearance Pursuant to 47 U.S.C. § 160(c) in the Phoenix, Arizona, Metropolitan Statistical Area*, Memorandum Opinion and Order, 25 FCC Rcd 8622, 8677 ¶¶ 108-09 (2010), *aff'd*, *Qwest Corp. v. FCC*, 689 F.3d 1214 (10th Cir. 2012).

[128] CenturyLink Comments at 35-37 (citing sources).

[129] *See 2012 Special Access Notice*, 27 FCC Rcd at 16350 ¶ 73.

[130] Joint CLEC Comments at 11.

exaggerating their barriers to entry. Neither approach comports with the tenets of sound competitive analysis. Further, as discussed above, CLEC efforts to minimize the importance of themselves or others as potential competitors – such as XO's defeatist (and disproven) arguments about the challenges associated with building laterals – are wholly unpersuasive.[131] The data and overwhelming evidence show that CLECs compete with ILECs now and are positioned to grab even more market share in both the short and long term. They cannot be allowed to enter the competitive marketplace but then exit the competitive analysis.

C. CLECs Fail to Account for Ways In Which They and ILECs Are Similarly Situated.

A core component of the CLECs' fatalistic narrative in this proceeding is the notion that they are at a significant – and effectively permanent – competitive disadvantage relative to ILECs.[132] But they grossly overstate both sides of the comparative equation.

As an initial matter, any notion of a persistent disparity between CLECs and ILECs in this marketplace should be quickly dismissed based on their divergent trajectories as revealed by the data and evidence in this docket. Indeed, if ILECs actually possessed the full suite of advantages that the CLECs assert, they would not face competition in **[BEGIN HIGHLY CONFIDENTIAL]** [redacted] **[END HIGHLY CONFIDENTIAL]** percent of all census blocks in which they offer special access service, with **[BEGIN HIGHLY CONFIDENTIAL]** [redacted] **[END HIGHLY CONFIDENTIAL]**.[133]

[131] *See supra* Section I.

[132] *See, e.g.*, Joint CLEC Comments at 22 (claiming that CLECs face "significant impediments" in trying to compete with ILECs).

[133] CenturyLink Comments at 6-7 (citing Initial Econometric Analysis at Table C).

These figures showing ubiquitous competitive deployment belie any claims of an uphill battle for ILECs' competitors. As noted above, the data also show that CLECs have an exclusive presence in some **[BEGIN HIGHLY CONFIDENTIAL]** ▇▇ **[END HIGHLY CONFIDENTIAL]** percent of buildings[134] – which, as a matter of common sense, would not be possible if they were at a uniform disadvantage. Nor would ILECs be experiencing declines in their commercial revenues and market shares (as discussed above), while other competitors grow their businesses with abandon, if they enjoyed an arsenal of systemic advantages.[135]

In fact, the actual experience of ILECs reveals a far more level playing field than the CLECs are willing to credit. Like CLECs, ILECs cannot deploy and maintain ubiquitous networks, but must instead rely on the networks of others. For example, as noted, CenturyLink itself has had to purchase access and rely on others to expand its offerings.[136] Like CLECs, ILECs face significant up-front fixed and sunk costs when they construct new facilities. CenturyLink, for instance, has noted that it devotes $3 billion annually to capital investment expenditures, adding to the $37 billion of invested property, plant, and equipment already on its books.[137] Like CLECs, ILECs must recoup their costs from their end users. And like CLECs,

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[134] Besen & Mitchell ¶ 27 & Table 2; *see also* Ad Hoc Telecommunications Users Committee Comments, WC Docket No. 05-25, Declaration of Susan Gately ¶ 4 (filed Jan 28, 2016).

[135] CenturyLink Comments at 24.

[136] *See, e.g.*, CenturyLink Comments at 17.

[137] *Id.* at 15 & n.34. Despite this investment, CenturyLink has deployed fiber to fewer than **[BEGIN HIGHLY CONFIDENTIAL]** ▇▇▇ **[END HIGHLY CONFIDENTIAL]** commercial buildings in its ILEC footprint. This equates to only **[BEGIN HIGHLY CONFIDENTIAL]** ▇ **[END HIGHLY CONFIDENTIAL]** percent of the 1.42 million commercial buildings in CenturyLink's footprint, and less than **[BEGIN HIGHLY CONFIDENTIAL]** ▇ **[END HIGHLY CONFIDENTIAL]** percent of the 117,000 commercial buildings with 5 or more tenants in that area. Brown/Williams Declaration ¶ 17.

ILECs must deal with other ILECs at arm's length. CenturyLink's Carla Stewart testifies, for example, that the company engages in "hard-fought negotiations" with other incumbents.[138] The myth that ILECs enjoy a host of unique advantages in the provision of dedicated services is just that.

Ironically, the Joint CLEC Commenters state that they are similarly situated to cable companies.[139] Of course, this asserted parity with cable should be a source of tremendous optimism for the CLECs – as discussed, cable has made enormous strides in this marketplace, which should bode well for the CLECs that claim to start from equal competitive footing. But even cable companies must incur significant investment costs and rely on the networks of others to expand their footprints, just like CLECs and ILECs. In short, the only meaningful asymmetry in this space is the federal *regulatory* burden faced by ILECs – a gap that the CLECs seek to widen in this proceeding.

D. CLECs Ignore the Consumer Benefits of Deregulated Rates.

CLECs and other parties argue as if the Commission must choose between the interests of ILECs in greater economic freedom and the interests of consumers in competitive choices and lower prices. In fact, however, given the increased competition in the dedicated transmission market, it is consumers that will benefit from less regulation. The Commission has recognized time and again that "[c]ompetition can protect consumers better than the best-designed and most

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[138] Stewart Reply Declaration ¶ 12.

[139] Joint CLEC Comments at 35-36 ("It is important to emphasize that these same barriers to wireline loop deployment apply to cable companies just as much as to traditional competitive LECs.").

vigilant regulation."[140] As the Commission has repeatedly and recently acknowledged, Congress itself has adopted a "preference for competition" in the agency's regulations.[141]

When opening this docket in 2005, the Commission acknowledged the importance of an "approach [that] will allow the market to determine rates where competitive market forces exist,"[142] seeking to "advance the pro-competitive, de-regulatory national policies embodied in the Telecommunications Act of 1996" as described in the 1999 *Pricing Flexibility Order*.[143] Chairman Wheeler has acknowledged that "the best way to serve consumers and economic growth is through the push and pull of competition."[144] Hence, he pledged that "where

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[140] *See Merger of MCI Communications Corp. and British Telecommunications plc*, Memorandum Opinion and Order, 12 FCC Rcd 15351, 15429 ¶ 204 (1997). *See also Comsat Corp*, Order and Notice of Proposed Rulemaking, 13 FCC Rcd 14083, 14149 ¶ 134 (1998) (noting the Commission's actions "to limit the application of unnecessary regulation where competition would serve as a better regulator").

[141] *Amendment to the Commission's Rules Concerning Effective Competition; Implementation of Section 111 of the STELA Reauthorization Act*, Report and Order, 30 FCC Rcd 6574 (2015). U.S. antitrust law "reflects a legislative judgment that ultimately competition will produce not only lower prices, but also better goods and services. 'The heart of our national economic policy long has been faith in the value of competition.' The assumption that competition is the best method of allocating resources in a free market recognizes that all elements of a bargain – quality, service, safety, and durability – and not just the immediate cost, are favorably affected by the free opportunity to select among alternative offers." *Nat'l Soc'y of Prof'l Eng'rs v. United States*, 435 U.S. 679, 695 (1978) (quoting *Standard Oil Co. v. FTC*, 340 U.S. 231, 248 (1951)).

[142] *Special Access Rates for Price Cap Local Exchange Carriers*, Order and Notice of Proposed Rulemaking, 20 FCC Rcd 1994, 2004 ¶ 24 (2005).

[143] *Access Charge Reform*, Fifth Report and Order and Further Notice of Proposed Rulemaking, 14 FCC Rcd 14221, 14224 ¶ 1 (1999).

[144] Tom Wheeler, Chairman, FCC, Remarks at the COMPTEL Fall Convention and Expo (Oct. 6, 2014).

competition exists, the Commission will protect it,"[145] since the "best answer for limited competition is more competition, plain and simple."[146]

The Commission has also long noted the inefficiency of tariffing, particularly in a competitive market.[147] Even in a situation where ILECs are assumed to possess bottleneck control, dominant carrier regulation "'is not the most effective and cost-efficient way to address exclusionary market power concerns.'"[148] The Commission has recognized in the packet-switched segment of the dedicated transmission market that "the contribution of tariffing

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[145] *Id.*

[146] Tom Wheeler, Chairman, FCC, Remarks at 1776 Headquarters: The Facts and Future of Broadband Competition (Sept. 4, 2014).

[147] *Policy and Rules Concerning the Interstate, Interexchange Marketplace*, Second Report and Order, 11 FCC Rcd 20730, 20744 ¶ 23 (1996); *Petition of Qwest Commc'ns Int'l Inc. for Forbearance from Enforcement of the Commission's Dominant Carrier Rules As They Apply After Section 272 Sunsets*, Memorandum Opinion and Order, 22 FCC Rcd 5207, 5213 ¶ 9 (2007) ("*Qwest Section 272 Sunset Forbearance Order*"); *Petition of AT&T Inc. for Forbearance Under 47 U.S.C. § 160(c) from Title II and Computer Inquiry Rules with Respect to Its Broadband Services*, Memorandum Opinion and Order, 22 FCC Rcd 18705, 18725 ¶ 33 (2007) ("*AT&T Enterprise Broadband Forbearance Order*") ("[T]he Commission has long recognized that tariff regulation may create market inefficiencies, inhibit carriers from responding quickly to rivals' new offerings, and impose other unnecessary costs."), *aff'd sub nom. Ad Hoc Telecomms. Users Comm. v. FCC*, 572 F.3d 903 (D.C. Cir. 2009) ("*Ad Hoc*"); *Petition of the Embarq Local Operating Companies for Forbearance Under 47 U.S.C. § 160(c) from Application of Computer Inquiry and Certain Title II Common-Carriage Requirements*, Memorandum Opinion and Order, 22 FCC Rcd 19478, 19497 ¶ 32 (2007) ("*Embarq Enterprise Broadband Forbearance Order*"), *aff'd sub nom. Ad Hoc*, 572 F.3d 903; *Qwest Petition for Forbearance Under 47 U.S.C. § 160(c) from Title II and Computer Inquiry Rules with Respect to Broadband Services*, Memorandum Opinion and Order, 23 FCC Rcd 12260, 12280-81 ¶ 36 (2008) ("*Qwest Enterprise Broadband Forbearance Order*"). These Reply Comments refer to these orders collectively as the *Enterprise Broadband Forbearance Orders*.

[148] *AT&T Enterprise Broadband Forbearance Order*, 22 FCC Rcd at 18727-28 ¶ 39 (citation omitted); *Embarq Enterprise Broadband Forbearance Order*, 22 FCC Rcd at 19500 ¶ 38; *Qwest Enterprise Broadband Forbearance Order*, 23 FCC Rcd at 12283 ¶ 42 (citation omitted); *Qwest Section 272 Sunset Forbearance Order*, 22 FCC Rcd at 5234 ¶ 53.

requirements, and the accompanying cost support and other requirements, to ensuring just, reasonable, and nondiscriminatory charges and practices for these services is *negligible*."[149]

These disadvantages have a concrete and deleterious effect on the market. Dominant carrier regulation prevents a carrier from "responding efficiently and in a timely manner to market-based pricing promotions, including volume and term discounts, or special arrangements offered by competitors."[150] Customers lose out, because they do not get the benefit of unrestrained price competition that would otherwise occur. Even the Commission's pricing flexibility rules still require contract-based tariffs to be filed with specified information "that is available publicly to any party, including competitors."[151] Detariffing these services would "facilitate innovative integrated service offerings designed to meet changing market conditions and . . . increase customers' ability to obtain service arrangements that are specifically tailored to their individualized needs,"[152] thereby making the detariffed carrier a more effective competitor and increasing competition in the marketplace.[153]

Dominant carrier regulations of the type at issue here thus hinder, instead of protect, consumers' interests, because they make it more difficult for business customers, and, ultimately,

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[149] *AT&T Enterprise Broadband Forbearance Order*, 22 FCC Rcd at 18723-24 ¶ 30 (emphasis added).

[150] *Id.* at 18730-31 ¶ 46. "[T]ariffing and cost support requirements limit [a carrier's] ability to negotiate service arrangements tailored to specific customer needs and to respond to new service offers from unregulated competitors because it must . . . provide advance notice of any tariff price changes." *Id.* at 18723 ¶ 29.

[151] *Id.* at 18725-26 ¶ 34.

[152] *Id.* at 18725 ¶ 33.

[153] *See, e.g.*, *id.* at 18726 ¶ 35.

end user consumers, to secure the individualized service offerings they seek.[154] As the *Enterprise Broadband Forbearance Orders* explain, regulatory constraints on a provider of services in a vigorously competitive market are not merely a problem for the regulated provider; they represent *losses to consumers*.[155] As the Commission has found, customers "*benefit* from the ability of all competitors to respond to competing market-based price offerings," and "*customers* . . . *benefit* by our granting . . . relief from [dominant carrier] regulation," because such regulation "reduces [the] ability to respond in a timely manner to . . . *customers'* demands for innovative service arrangements."[156] It is "competition," not dominant carrier regulation, that "protect[s] consumers."[157]

III. THERE IS NO BASIS ON WHICH TO RE-REGULATE DSN SERVICES NOW SUBJECT TO PRICING FLEXIBILITY OR OTHER RELIEF OR FURTHER REGULATE PRICES FOR PRICE-CAP DSN OFFERINGS

Given the vibrant multi-platform competition depicted by the data collection and other record evidence, any notion of increasing ILEC regulation in this space should be readily dismissed. Predictably, though, CLECs try to downplay their significant gains and sustained success, insisting that the only way they can move forward is if ILECs are forced to move backward – specifically, to a bygone era of extensive price cap regulation for their legacy TDM-based services. As CenturyLink has explained and reiterates below, imposing additional regulation on DSn-capacity services in place of or in addition to the suspended pricing flexibility

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[154] *Id.* at 18723 ¶ 29.

[155] *E.g., id.* at 18723 ¶ 29, 18725 ¶ 33, 18726 ¶ 35, 18730 ¶ 43.

[156] *Id.* at 18723 ¶ 29, 18725 ¶ 33 (emphasis added). "[E]liminating these requirements . . . make[s petitioner] a more effective competitor . . . which in turn . . . increase[s] even further the amount of competition in the marketplace." *Id.* at 18726 ¶ 35.

[157] *Id.* at 18730 ¶ 43.

regime would be counterintuitive and counterproductive, particularly as the industry is accelerating the transition from these legacy facilities to next-generation Ethernet offerings.

A. Any New Regulatory Regime for DSn-Capacity Services Must Promote Deployment and Reflect Competitive Realities.

As stated in CenturyLink's opening comments, the record supports adoption of certain key principles that can and should guide the Commission as it considers replacement regulations.[158]

1. ***No rescission of existing pricing flexibility relief.*** There is no basis on which the Commission could or should remove pricing flexibility grants or other regulatory relief where it has already been granted.[159] As has been discussed, competitive deployment is ubiquitous in those areas in which the Commission granted ILECs "Phase I" and/or "Phase II" pricing flexibility under the triggers adopted in 1999 and suspended in 2012.[160] Given that the marketplace has become even more competitive since 2013, competition is guaranteed in both

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[158] CenturyLink Comments at 38.

[159] *Id.* at 26-29; *see also* AT&T Comments at 18-23.

[160] CenturyLink Comments at 26-27. As of 2013, competitors had deployed facilities in **[BEGIN HIGHLY CONFIDENTIAL]** [redacted] **[END HIGHLY CONFIDENTIAL]** percent of census blocks within Phase I MSAs, **[BEGIN HIGHLY CONFIDENTIAL]** [redacted] **[END HIGHLY CONFIDENTIAL]** percent of connections were in census blocks with competitive deployment, and **[BEGIN HIGHLY CONFIDENTIAL]** [redacted] **[END HIGHLY CONFIDENTIAL]** of business establishments were in those census blocks. CenturyLink Comments at 27 (citing Initial Econometric Analysis at Table C-PF1). Likewise, competitors had deployed high-capacity facilities in **[BEGIN HIGHLY CONFIDENTIAL]** [redacted] **[END HIGHLY CONFIDENTIAL]** percent of census blocks within Phase II MSAs, **[BEGIN HIGHLY CONFIDENTIAL]** [redacted] **[END HIGHLY CONFIDENTIAL]** percent of reported connections in Phase II MSAs were in census blocks in which competitors had deployed, and **[BEGIN HIGHLY CONFIDENTIAL]** [redacted] **[END HIGHLY CONFIDENTIAL]** percent of establishments in Phase II MSAs were in census blocks featuring competitive deployments. CenturyLink Comments at 26-27 (citing Initial Econometric Analysis at Table C-PF2).

the short and long term in virtually every census block. The Commission thus should affirmatively make clear that it will *not* back-track by rescinding relief in MSAs currently subject to pricing flexibility.

2. ***Expansion of Phase II relief in all Phase I MSAs.*** Given the nearly identical deployment statistics in Phase I and Phase II MSAs, the Commission should not only refrain from eliminating relief where it has been granted, but also award Phase II relief in all MSAs currently subject to Phase I relief.[161]

3. ***Relief from price caps where there is one or more actual competitor providing the same service in the relevant geographic unit using its own facilities, third-party facilities, or UNEs.*** As CenturyLink and others have explained, fundamental tenets of competitive analysis call for including all reasonably close substitutes in a product market, a concept that has been embraced by the Commission, the courts, and the expert antitrust agencies.[162] Disparate regulatory treatment of such competitors in the same market would undermine the intellectual foundation of fairness and predictability on which any regulatory regime must rest.[163] Accordingly, the Commission should not – and lawfully cannot – subject an ILEC to price caps while its competitor (or competitors) in a market is free to operate without such restrictions.

4. ***Relief from price caps where business density is high or there are other indicia showing that third parties could likely provision service using their own facilities, third-party facilities, or UNEs.*** Likewise, to reflect potential competition, the Commission should afford

[161] CenturyLink Comments at 32-35; *see also* AT&T Comments at 24-29.

[162] CenturyLink Comments at 30-35; Verizon Comments at 68-69; AT&T Comments at 6-11.

[163] CenturyLink Comments at 30-35; *see also* Verizon Comments at 68-69.

ILECs relief from price-cap regulation where there is sufficient demand to enable non-ILECs to provide service on their own.[164]

B. The Commission Must Reject the Specific Recommendations Made by Commenters Seeking to Re-Regulate DSn Services.

Adhering to the above principles would promote infrastructure deployment in a manner consistent with law, policy, and sound economic principles, and with the Commission's stated inclination in this proceeding to facilitate "the relaxation or even the elimination of price cap regulation" where actual or potential competition is sufficient to ensure just and reasonable rates.[165] The framework CenturyLink supports would also enable the Commission to achieve its goal of "promot[ing] competition, investment, and access to services used by businesses across the country."[166] It also would advance the agency's efforts to "guide and accelerate the technological revolutions that are underway involving the transitions from" TDM-based networks and copper loops to all-IP multi-media networks relying on diverse technologies including fiber, cable, and wireless.[167]

In stark contrast, competitors' various proposals for *increased* regulation of ILEC DSn-capacity services – and in particular, regulation of the rates for those services – would only hold back this generating-defining transition, all based on an implausibly grim view of the marketplace that bears no resemblance to the evidence compiled. The imposition of rate or other regulation requires far more than a mere lament that there is not more competition. Rather, the

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[164] CenturyLink Comments at 35-37; *supra* Section II.B.

[165] *2012 Special Access Notice*, 27 FCC Rcd at 16352 ¶ 80.

[166] *Id.* at 16341 ¶ 56.

[167] *Technology Transitions Report and Order*, 30 FCC Rcd at 9372-73 ¶ 8.

extreme remedies proposed by CLECs here require the demonstration of an actual market failure[168] – which itself is a rare event in which private businesses are unable to provide service[169] – as well as a showing that the regulatory solution is viable. CLECs have made neither showing, nor can they. They surely have not reached the high hurdle that the Commission must apply to advocates for increased regulation.[170] The Commission thus should reject these parties' arguments.[171]

1. ***No Reversal of Any Pricing Flexibility.*** Several parties use this occasion to revive previous demands that the Commission force ILECs to revert price cap regulation in areas where they have received pricing flexibility relief.[172] As discussed in CenturyLink's opening comments and reiterated above, there is absolutely no basis on which to claw back that relief. Indeed, in Phase I and Phase II MSAs, competitive deployment is ubiquitous, and even higher than the (already extremely high) nationwide average. And notwithstanding the manufactured

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[168] *See, e.g.*, *Amendment of 47 CFR § 73.658(j)(1)(i) and (ii), the Syndication and Financial Interest Rules*, Tentative Decision and Request for Further Comments, 94 FCC2d 1019 ¶ 107 (1983) (requiring a finding that "there is evidence of a market failure and a regulatory solution is available that is likely to improve the net welfare of the consuming public"); *Farmers Union Cent. Exch., Inc. v. FERC*, 734 F.2d 1486, 1508 (D.C. Cir. 1984) ("It is of course elementary that market failure and the control of monopoly power are central rationales for the imposition of rate regulation.") (citing S. Breyer, *Regulation and Its Reform* 15-16 (1982)).

[169] *MB Fin. Group, Inc. v. United States Postal Serv.*, 545 F.3d 814, 819-20 (9th Cir. 2008) ("At bottom, market failure occurs when there is no incentive for private businesses to provide a service.").

[170] *See* CenturyLink Comments at 28-29.

[171] In any event, the Commission clearly could not adopt any of these recommendations without first seeking notice and comment in compliance with the APA.

[172] *See, e.g.*, XO Comments at 55-57; Sprint Comments at 80; *see also 2012 Special Access Notice*, 27 FCC Rcd at 10353-53 ¶ 88 (noting previous arguments from CLECs that the Commission should require ILECs automatically to revert to price caps in areas without competition).

deployment obstacles cited by some parties, competitors with facilities in a census block generally can commence service with relative ease to other areas within that census block.[173] Consistent with such competitive conditions, no carrier has filed a formal complaint complaining about rates in any MSA subject to pricing flexibility, despite being afforded the opportunity to do so. This fact further underscores the absence of competitive harm in those areas.[174] Moreover, while CLECs criticize the suspended triggers, the data show that those triggers were actually too *conservative*, and resulted in continued regulation where there is meaningful competition.[175] In short, there is no basis on which to conclude that competitive conditions in areas with pricing flexibility have somehow deteriorated – to the contrary, the environment inevitably will be even more dynamic today.

Further, the CLECs neglect to mention, must less respond to, the fact that reversing pricing flexibility grants would necessarily void agreements that were structured based on the presence of such relief.[176] As CenturyLink has explained, that outcome would harm not just ILECs but their customers – including wireless providers and CLECs themselves, to the extent they take wholesale service – who may actually prefer to retain rights or benefits acquired through those arrangements.[177] The need to devise new agreements based on the reinstituted price caps would be a burden unto itself, but that process could further cause either side of the

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[173] *See, e.g.*, CenturyLink Comments at 27-28; *supra* Section I.C (rebutting CLEC arguments about entry barriers).

[174] CenturyLink Comments at 28.

[175] AT&T Comments at 11-16.

[176] CenturyLink Comments at 29 (describing the sort of pricing flexibility agreements entered into by CenturyLink).

[177] *Id.*

transaction to lose out on favorable provisions that it had negotiated. For instance, a customer that preferred the timeframe applicable under the old agreement might find itself subject to a longer term solely by virtue of the fact that a new agreement was required, or unable to enjoy a one-off discount made possible by Phase II relief. In this sense, reverting to price cap regulation in lieu of pricing flexibility would cause widespread disruption to a large number of existing business arrangements. The Commission cannot rationally abandon its prior flexible, procompetitive policy without accounting for these reliance interests. As the Supreme Court "underscore[d]" just this past Term, the APA requires an even "more substantial justification" where a "new policy rests upon factual findings that contradict those which underlay its prior policy," and where the Commission's prior policy "has engendered serious reliance interests that must be taken into account."[178] The record here does not support any of the factual findings that would be necessary for the Commission to revert to legacy regulation of ILECs.

2. ***No Voiding or Abrogation of Existing Contracts.*** For similar reasons, the Commission must refrain from voiding or abrogating existing contracts, even if it were to reverse prior grants of pricing flexibility. Some CLECs challenge various terms contained in special access contracts and demand that the Commission invoke the "fresh look" doctrine to give customers the option to "re-establish their business relationships."[179] Those complaints about specific contract provisions are baseless, as described below. In all events, though, the Commission should not undertake any type of review or process that would re-open or terminate current agreements. Apart from the reliance interests and harms noted immediately above, the

[178] *FCC v. Fox Television Stations, Inc.*, 556 U.S. 502, 515 (2009); *see also Perez v. Mortgage Bankers Ass'n*, 135 S. Ct. 1199, 1209 (2015).

[179] Joint CLEC Comments at 11, 92-93; Sprint Comments at 82-83.

Commission must meet a high standard in order to carry through with such abrogation – one that could not possibly be met on this record. The Commission may "abrogate existing contracts only where the public interest 'imperatively demands' such action."[180] Given the hardship that would result for customers and providers if existing arrangements were cut short, the public interest here imperatively *precludes* undoing these contracts.

Moreover, the Commission cannot replace carrier-instituted rates without following the procedures of Section 205, which requires (1) a full opportunity for a hearing, (2) determinations that a rate or term "is or will be in violation of the Act" and a decision on the practice to be followed, and (3) an adequate record on which to make those determinations.[181] The Commission cannot reach such conclusions based on the Bureau's data (which, if anything, dictates the opposite conclusion), and no CLEC fills the evidentiary gap with anything other than broad assertions.

Thus, contrary to the Joint CLEC Commenters' suggestion that the Commission has broad authority to scrutinize contracts in this manner,[182] the Commission itself has emphasized that it invokes the fresh look doctrine "sparingly" and only when it is "necessary to promote consumer choice and eliminate barriers to competition."[183] As discussed in detail above,

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[180] *Union Pac. Fuels, Inc. v. FERC*, 129 F.3d 157, 161 (D.C. Cir. 1997) (quoting *Metropolitan Edison Co. v. FERC*, 595 F.2d 851, 856 n.29 (D.C. Cir. 1979)).

[181] 47 U.S.C. § 205(a); *see also, e.g.*, *AT&T Co.* v. *FCC*, 449 F.2d 439, 451 (2d Cir. 1971) (holding that Section 205(a) "required the Commission to leave the matter of prescription for resolution on an adequate record").

[182] Joint CLEC Comments at 92-93.

[183] *Implementation of Section 621(a)(1) of the Cable Communications Policy Act of 1984 as amended by the Cable Television Consumer Protection and Competition Act of 1992*, Second

enormous strides by cable operators and CLECs in the provision of high-capacity business services makes clear that there are no barriers to competition in this space.

3. ***No Presumption of Market Power.*** The Joint CLEC Commenters argue that the Commission need not engage in any sort of market power analysis and may merely assume that ILECs have market power.[184] Apart from its incongruity with the record, this proposal has the appropriate burden of proof exactly backwards. The burden of showing whether additional regulation is necessary should rest with the proponent of the new obligation, rather than its target. As CenturyLink has noted, the Commission should not put ILECs in the untenable position of continually defending the regulatory status quo and their existing commercial relationships.[185] Rather, a more administrable approach would resemble the one recently mandated by Congress in the cable context, by which the existing statutory test for determining the existence of "effective competition" was to be replaced by a presumption of effective competition absent a showing to the contrary.[186] Moreover, the party calling for greater regulation in a particular geographic market should have standing to make such a demand – for instance, it should be a competitor in that marketplace that has suffered demonstrable competitive harm warranting regulatory intervention.[187]

Report and Order, 22 FCC Rcd 19633, 19644-45 ¶ 24 (2007) (citing cases in which the Commission declined to use the fresh look doctrine).

[184] Joint CLEC Comments at 48-50.

[185] CenturyLink Comments at 29.

[186] 47 U.S.C. § 543(o)(1).

[187] CenturyLink Comments at 29.

4. ***No Alteration of Price Cap Index or Reinitializing of Price Cap Rates.*** Nor should the Commission alter the price cap index ("PCI") – or relatedly, adopt a new "X-factor" – or otherwise reinitialize price cap rates.[188] The general purpose of such proposals is to place artificial restrictions on the rates that ILECs can charge for their "special access" services – which is wholly unnecessary due to the existence of competitive pressures, particularly from Ethernet providers. Proposals of this type appear to be premised on the false belief that ILECs enjoy some sort of pricing "windfall" in connection with their dedicated transmission offerings.[189] As CenturyLink has noted, this is not at all the case. RBOC commercial service revenue for 2014 was *down*, in contrast to an annual growth rate for the cable industry of 25 percent.[190]

Finally, there is no reason to believe that price cap rates are or ever were fully compensatory, much less over-compensatory. In fact, as Verizon notes, baseline special access prices were held artificially low for many years.[191] Perhaps more to the point, any suggestion that the per-circuit costs of legacy ILEC transmission services have declined over time is fanciful. Even if technological advances have reduced total network costs over time (a point the CLECs make no effort to prove), the proportion of such costs attributable to each circuit has risen significantly as ILEC customers in the enterprise space have migrated to competitors' offerings. If (to take a highly simplified example) the costs of operating a network for one year drop over time from $100 to $80, but the number of users purchasing service in a year also drops

[188] Joint CLEC Comments at 65-67; Sprint Comments at 84-85.

[189] Joint CLEC Comments at 66.

[190] CenturyLink Comments at 23-24.

[191] Verizon Comments at 61-62.

from 100 to 60, then the total cost per user will *rise* from $1 ($100 spread among 100 users) to $1.33 ($80 spread among 60 users). This problem is exacerbated by the migration of *residential* customers to cable, wireless, VoIP, and other telephone offerings – although these users do not purchase special access services, their move away from the ILEC service affects the allocation of any joint and common associated with both residential and business offerings (including, for example, relevant facilities and labor costs). It is beyond dispute that ILECs have indeed seen a great decline in the number of access lines served, and – as detailed above – that third-party providers have made tremendous inroads in the dedicated services markets, resulting in fewer ILEC customers among whom to allocate fixed costs. Thus, altering the PCI or reinstituting price cap rates will not ensure just and reasonable rates, as CLECs claim – rather, they will merely ensure the bargain-basement rates that CLECs prefer, but are not entitled, to pay, while starving ILECs of capital needed to operate and upgrade their facilities

5. ***No New Triggers.*** Finally, the Commission should reject XO's proposed replacement triggers.[192] As an initial matter, CenturyLink has explained that to the extent the Commission is inclined to develop a replacement regime, it should refrain from adopting *any* concrete triggers at this time until the Bureau's data set is confirmed to be final and updated.[193] Even some CLECs appear to acknowledge that it would be premature at this stage to adopt particular triggers.[194]

[192] XO Comments at 44-55.

[193] CenturyLink Comments at 37-38.

[194] *See, e.g.*, Sprint Comments at 80.

But in all events, the Commission should dismiss both XO's proposed triggers and the methodology that yielded them. That methodology suffers from the various infirmities detailed in Section I above, producing triggers that are far too strict if not wholly unrealistic. In particular, XO's proposed trigger for relief for DSn channel terminations – the presence of four competitors that have already built to a particular location[195] – expressly reads out of the picture any nearby facilities-based competitor (contrary to precedent requiring consideration of potential competition and real-life evidence that such competitors can and do seek to compete in nearby locations), includes a building-by-building approach that would be impossible to administer, and ignores variances in demand that may dissuade competitors from building out to a particular location, among other shortcomings. As the Reply Econometric Analysis explains, the conclusion that four competitors are required to ensure competition is simply untrue in the special access marketplace.[196] The number of special access competitors connected to a building will generally be highly correlated with the demand in the building; although smaller buildings support fewer competitor connections, that does not make them less competitive, as each competitor in the building will have incentives to expand its capacity and compete for all customers there.[197]

XO's proposed application of its flawed triggers makes a bad thing far worse. Applying those triggers to areas already subject to pricing flexibility relief is merely XO's preferred way of

[195] XO Comments at 53.

[196] Reply Econometric Analysis at ¶¶ 18-42.

[197] *Id.* at ¶ 19.

reversing that relief and disrupting existing business arrangements[198] – all of which would be baseless and harmful, as discussed above. But XO makes clear that even if its flawed triggers are met, that step represents merely a first cut, as XO would then have the Commission engage in continuous monitoring in anticipation of either yanking away that relief or revising the triggers once again.[199] In short, XO envisions a scenario in which its triggers would remain in effect only so long as they cannot be met, after which the Commission would have at its disposal various means by which to reverse course, including the option to adopt new unachievable criteria for relief. Such a regime might benefit XO, but it would be inimical to the nation's deployment goals and to American consumers. The Commission should reject it.

IV. THERE IS NO BASIS ON WHICH TO SUBJECT ETHERNET SERVICES TO PRICE REGULATION

A. There Is No Policy Rationale for Subjecting Ethernet Services to Price Regulation.

1. Competition in the Ethernet Service Market is Robust and Growing.

The Commission has for some time recognized that the industry is transitioning away from TDM-based services toward an all-IP network.[200] Sprint's migration of its wireless backhaul to competitive Ethernet provides one of many illustrations evidencing the extent to

[198] XO Comments at 44-45.

[199] *Id.* at 45.

[200] *See, e.g.*, *Technology Transitions*, Order, Report and Order and Further Notice of Proposed Rulemaking, Report and Order, Order and Further Notice of Proposed Rulemaking, Proposal for Ongoing Data Initiative, 29 FCC Rcd 1433 (2014).

which legacy TDM-services are being phased out.[201] The displacement of TDM-based circuits by Ethernet-based circuits in the dedicated transmission sector is a prominent sub-current of this migration.[202] As CenturyLink noted in its initial comments, this transition is only logical, as Ethernet links can accommodate more data then legacy DS1 and DS3 links, and also offer better quality-of-service options not available over traditional transmission facilities.[203]

This migration to Ethernet-based services is evident even within the span of a single year, based on the Special Access Data compiled for 2013. In that year, for instance, the bandwidth of Ethernet circuits provisioned by ILECs grew at **[BEGIN HIGHLY CONFIDENTIAL]** ■ **[END HIGHLY CONFIDENTIAL]** percent.[204] Even more telling, Ethernet circuits provisioned by competitive providers during that same period grew at **[BEGIN HIGHLY CONFIDENTIAL]** ■ **[END HIGHLY CONFIDENTIAL]** percent – or more than six times

[201] Letter from Keith M. Krom, Gen. Atty & Assoc. Gen. Counsel, AT&T, to Marlene H. Dortch, Secretary, FCC, WC Docket No. 05-25, at 6 & n.34 (filed Oct. 13, 2015) ("AT&T Oct. 13 Letter").

[202] *See, e.g.*, *Investigation of Certain Price Cap Local Exchange Carrier Business Data Services Tariff Pricing Plans*, Order Initiating Investigation and Designating Issues For Investigation, 30 FCC Rcd 11417, 11419 ¶ 3 (2015) ("*Designation Order*"); *see also* Vertical Systems Group, Ethernet Market Share – U.S.: Mid-2105 Port Share ("U.S. Ethernet port growth in the first half of 2015 was unprecedented, easily surpassing estimates . . . . [One of the p]rimary growth drivers for 2015 [is] massive migration from TDM to Ethernet services.").

[203] CenturyLink Comments at 14.

[204] *See* Initial Econometric Analysis.

the growth rate of the ILECs.[205] In all, International Data Corporation ("IDC") projects U.S. Ethernet service revenues to grow from $8.0B in 2015 to $12.1B by 2019.[206]

This significant growth is a clear bellwether of robust competition within the Ethernet services market. Competitive providers are already far and away the biggest drivers of this growth in the market for Ethernet services. The record in this proceeding points inexorably toward a finding of robust competition in the provision of Ethernet services. Indeed, the Commission has already acknowledged that competitive providers "have had success"[207] in winning a significant share of high-capacity Ethernet services marketplace, and has also recognized that competition in increasing.[208] The data collected make clear that, while true, this is a great understatement.

ILECs already represent a minority of the top eight Ethernet providers based on retail port share (which, as of mid-year 2015, were AT&T, Level 3, Verizon, CenturyLink, Time Warner Cable, Comcast, XO, and Cox).[209] The Ethernet Services market is extremely diverse,

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[205] Initial Econometric Analysis at 24. Further, as the Econometric Analysis observes, this likely understates competitive growth rate for competitive providers for a variety of reasons. *Id.* at 22.

[206] IDC Market Analysis Perspective: *U.S Carrier Ethernet and IP VPN Network Services, 2015* (Sep. 2015), at 5 ("*IDC 2015 Carrier Ethernet and Network Services Report*"). This prediction in fact understates growth, because IDC also expects pricing for these services to decline over this period. *Id.* at 20.

[207] *Designation Order*, 30 FCC Rcd at 11422 ¶ 10.

[208] *Id.* at 11419 ¶ 3.

[209] *Mid-Year 2015 U.S. Carrier Ethernet Leaderboard*, Vertical Systems Group (Aug. 24, 2015), http://www.verticalsystems.com/vsglb/mid-year-2015-u-s-carrier-ethernet-leaderboard/.

and predicted to become even less concentrated.[210] No single provider, including any ILEC, has a port share exceeding one-fifth of the total market.[211] Several dozen small providers cumulatively have a market share of more than twenty percent.[212] And the two largest ILECs, Verizon and AT&T, saw their Ethernet services market shares decline from 2013-2014, both in the business carrier Ethernet services market and in the metro Ethernet services market.[213] CenturyLink, for its part, saw its metro Ethernet retail market share within its own legacy ILEC footprint decline from **[BEGIN CONFIDENTIAL]** [redacted] **[END CONFIDENTIAL]** percent to **[BEGIN CONFIDENTIAL]** [redacted] **[END CONFIDENTIAL]** percent from 2014 to 2015.[214] In that same time period, the cable MSO market share within CenturyLink's footprint increased from **[BEGIN CONFIDENTIAL]** [redacted] **[END CONFIDENTIAL]** percent in 2014 to **[BEGIN CONFIDENTIAL]** [redacted] **[END CONFIDENTIAL]** percent in 2015.[215]

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[210] Frost & Sullivan, *Business Carrier Ethernet Services Market Update*, 2015, at 9 (Sep. 2015) (projecting a 67% decline in the percentage of the business carrier Ethernet services market share held by the top 4 companies by 2020).

[211] AT&T Oct. 13 Letter at 2 (citing Vertical Systems Group, ENS Research Program, 2015).

[212] *Id.*

[213] Frost & Sullivan, Business Carrier Ethernet Services Market Update, 2015, at 33, 45 (finding that, as measured by revenue, from 2013 to 2014 Verizon declined by 2.9% and AT&T declined by 0.6% in business carrier Ethernet services market share, and for that same period Verizon declined by 4.4% and AT&T by 0.9% in metro Ethernet services market share).

[214] *See* TNS Business Wave 1Q2014 to 4Q2015 Metro Ethernet provider market share by customer count within CenturyLink's ILEC footprint, provided as Exhibit 4. These figures resulted from a study conducted by TNS through telephone surveys of small, medium, and enterprise business customers. It was initially based on TNS's quarterly surveys in 2015 used to generate its BusinessWave Surveys, which are provided by subscription to CenturyLink and other providers for business purposes.

[215] *Id.*

Competitive providers are expected to increase their presence and market share going forward. Level 3 already has a larger market share than CenturyLink for business carrier Ethernet services,[216] is the second-largest provider of enterprise Ethernet Services based on retail port share,[217] and is projected to further strengthen its competitive positioning in the Ethernet services market as synergies emerge out of the company's ongoing integration of the tw telecom business.[218] Windstream's investment in copper- and fiber-based Ethernet rollout in its ILEC territory now enables it to reach nearly 95 percent of the business customers in its footprint, positioning it as "a key challenger to the top 4 companies in the market."[219]

Cable companies in particular have dramatically expanded the availability of Ethernet access. Three cable operators already are among the eight largest Ethernet providers in the country based on retail share of Ethernet ports.[220] And cable providers are poised for further explosive growth, based on their relatively ubiquitous networks.[221] Indeed, it is clear that

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[216] *IDC 2015 Carrier Ethernet and Network Services Report* at 10 (reporting a 21% Ethernet services market share for Level 3 for 2014, compared with 12% for CenturyLink); *see also* Frost & Sullivan, *Business Carrier Ethernet Services Market Update*, 2015, at 32 (reporting a 14.8% business carrier Ethernet services market share for Level 3 for 2014, compared with 10.1% for CenturyLink).

[217] *Mid-Year 2015 U.S. Carrier Ethernet Leaderboard*, Vertical Systems Group (Aug. 24, 2015), http://www.verticalsystems.com/vsglb/mid-year-2015-u-s-carrier-ethernet-leaderboard/.

[218] Frost & Sullivan, *Business Carrier Ethernet Services Market Update*, 2015, at 34.

[219] *Id.*

[220] Initial Econometric Analysis at 23 (citing VSG Mid-Year 2015 U.S. Carrier Ethernet Leaderboard).

[221] The Commission recognized, several years ago, that "although cable operators are relatively new entrants competing in the marketplace for the provision of telecommunications services to business customers, cable operators have expansive – and in some areas, ubiquitous – network facilities that can be upgraded to compete in telecommunications markets at relatively low incremental cost." Order, *Petition for Declaratory Ruling to Clarify 47 U.S.C. § 572 in the*

"[c]able is the fastest growing segment in the wholesale and retail business Ethernet markets."[222] As Frost & Sullivan observe, "the past couple of years have seen MSOs become competitive in the wholesale Ethernet space, thanks to the dense network footprint cable companies have in Tier 2 and Tier 3 markets. The ongoing migration from TDM to Ethernet is providing cable operators an opportunity to sell access services to ILECs and CLECs looking to expand their network footprint."[223] Indeed, in just the past two years, "cable operators have increased the penetration of business locations they serve by more 50 percent while ILEC penetration dipped nearly 14 percent."[224]

In its initial comments and above, CenturyLink provided significant additional detail describing the dramatic expansion in the availability of cable Ethernet services. [225] The rise of

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Context of Transactions Between Competitive Local Exchange Carriers and Cable Operators, WC Docket No. 11-118, ¶ 28 (2012) (internal citations omitted). Illustrative of this fact, as CenturyLink noted in its prior comments, CenturyLink recently responded to an RFP for a large customer with numerous locations spread across the country, and for nearly three-quarters of those locations Ethernet access was available from a cable provider. CenturyLink Comments, Declaration of Carla Stewart ¶ 7.

[222] Sean Buckley, *Cable hones its wholesale skills in special access, wireless backhaul*, Fierce Telecom (Apr. 7, 2015), http://www.fiercetelecom.com/special-reports/cable-hones-its-wholesale-skills-special-access-wireless-backhaul;*see also 2014 U.S. Cable MSO Ethernet Leaderboard*, Vertical Systems Group (Mar. 16, 2015), http://www.verticalsystems.com/vsglb/2014-u-s-cable-mso-ethernet-leaderboard/ ("[T]he Cable MSO segment remained the fastest growing overall in 2014 . . . outpac[ing] the Incumbent Carrier and Competitive Provider segments . . . [and] fortifying their Ethernet offerings to meet the needs of larger businesses with regional and nationwide networks.").

[223] Frost & Sullivan, *Wholesale Carrier Ethernet Services Market Update*, 2015 at 17 (August 2015) (Also noting that low speed Ethernet services from cable companies (2-10 Mbps) are the ideal replacement for traditional T1 last mile connections).

[224] Sean Buckley, *Cable Operators taking greater share of large businesses, says analyst firm*, FierceTelecom (Sep. 21, 2015), http://www.fiercetelecom.com/story/cable-operators-taking-greater-share-large-businesses-says-analyst-firm/2015-09-21.

[225] CenturyLink Comments at 21-25.

cable in the Ethernet services sector also squares with CenturyLink's own experiences as a purchaser of access. Further graphically illustrating that trend, in December 2015, **[BEGIN HIGHLY CONFIDENTIAL]** [redacted] **[END HIGHLY CONFIDENTIAL]**.[227]

Just as the Special Access Data understates the state of competition in the Ethernet services market due to the vintage of that data, it also surely understates the opportunity for increased competition because it excludes competitive last-mile facilities, particularly cable facilities.[228] Competitive options are also certain to increase because the geographic range of competition posed by a service provider is not limited to specific locations of active circuits at a particular snapshot in time. As detailed above, it is relatively easy for a competitive provider to expand its capacity to serve customers within the route structure of its existing network by deploying lateral facilities connected to the core network. The currently competitive environment for Ethernet services, coupled with the virtual certainty that competition will only increase going forward, undercuts any argument to subject Ethernet services to price regulation.

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[226] Stewart Reply Decl. ¶ 4.

[227] *Id.*

[228] Initial Econometric Analysis at 16 ("The 2013 Special Access Data, however, does not capture facilities that can be used to provide special access services that compete with ILEC special access offerings such as last-mile broadband service over DOCSIS 3.0 or over optical fiber.").

2. Prices for Ethernet Services Continue Their Sharp Decline.

The ongoing year-to-year decline in rates for Ethernet services also underscores the existence of vibrant competition in this market place. U.S. retail carrier Ethernet pricing fell by double-digit rates for all services across all speeds between 2010 and 2015.[229] In the sub-10 Mbps category ideally suited to substitute for legacy T1 speed legacy facilities, average monthly pricing has decreased more than 20 percent for Ethernet private line and virtual private line services since 2011.[230]

Other market analyses reflect comparable results. For instance, across North America, median FastE EVPN prices have decreased at a compounded annual rate of 30 percent since 2012.[231] On a selection of routes traversing the U.S. and Canada, most of the median FastE EoMPLS prices have similarly decreased between 21 and 25 percent, compounded annually, since 2012.[232] Most importantly, Ethernet pricing is projected to continue to decline going forward.[233] CenturyLink's own experience is consistent with these general trends. Rates for CenturyLink's Ethernet services have fallen significantly over time – for instance, its average revenue per unit for its five largest carrier customers for a 10 Mbps Metro Ethernet service decreased **[BEGIN HIGHLY CONFIDENTIAL]** ■ **[END HIGHLY CONFIDENTIAL]**

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[229] Vertical Systems Group Pricing Data by Service Segment 2011 – 2015; *see also* Vertical Systems Group – Trends and Observations (2016) ("Average monthly prices for U.S. Carrier Ethernet services continued to steadily decline in 2015. Despite some price erosion in excess of 15% for services in certain markets, the effective rate of decline ranges between 2% and 8%.").

[230] Vertical Systems Group Pricing Data by Service Segment 2011 – 2015.

[231] TeleGeography Ethernet Pricing Service H1 2015 Market Summary at 12.

[232] *Id.* at 3.

[233] IDC Market Analysis: U.S. Carrier Ethernet Services 2015 – 2019 Forecast at 16.

percent over a recent two-year period.[234] CenturyLink has no choice but to lower its rates to ensure they are competitive, because its customers routinely drive a hard bargain in negotiations for its DSn and Ethernet services, with **[BEGIN HIGHLY CONFIDENTIAL]** [redacted] **[END HIGHLY CONFIDENTIAL]**.[235]

Competitive providers doggedly ignore this overwhelming evidence of robust competition and declining prices in the Ethernet services market, continuing to point to supposedly "high" ILEC "rack" rates for ILEC Ethernet services to argue for continued price regulation.[236] But, as has been for true years now, these red herring "rack" rates are irrelevant; customers typically obtain ILEC Ethernet services pursuant to contract, at significantly discounted rates.[237]

Windstream contends that supposedly higher prices for Ethernet services in the United States and Canada, compared with other regions, demonstrate a lack of sufficient competition for Ethernet services in the United States.[238] This argument also misses the mark for numerous reasons. First, Windstream does not disaggregate Canadian circuits from U.S. Circuits. Second,

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[234] Brown/Williams Decl. ¶ 10.

[235] Brown/Williams Decl. ¶¶ 11-12.

[236] *See, e.g.*, Sprint Comments at 48-49.

[237] *See, e.g.*, AT&T Reply Comments, WC Docket No. 5-25 *et al.*, at 6-7 (filed May 31, 2013) (detailing competitive provider purchases of AT&T, Verizon and CenturyLink Ethernet services pursuant to contract discounts); *see also* Letter from Maggie McCready, Vice President, Verizon to Marlene Dortch, FCC, WC Docket No. 05-25 *et al.* (filed Mar. 26, 2015) (explaining that Verizon special access discount plans offer discounts ranging up to 52% off Verizon's tariffed "rack rate").

[238] Windstream Comments at 53-54 (citing TeleGeography, *Local Access Pricing Service, 2014 Local Access Market Summary* at 2-4).

there is no merit to conclusions drawn by benchmarking North American pricing for Ethernet services against pricing in other regions, given the great number of variables that could drive such differences. Most importantly, it is imprudent to attempt to draw any conclusions about the state of competition from a limited, snapshot-in-time data point.

To illustrate, the TeleGeography conclusion that Windstream cites for the proposition that North American Ethernet is "relatively more expensive"[239] is based on data for the first half of 2014, indicating that the median monthly lease for a 10 Mbps Ethernet circuit in the U.S./Canada has a median city price of $1,247, compared with a median monthly lease price of $563 for Oceania and $696 for Western Europe.[240] By the second half of 2014, however, TeleGeography had determined that the metro median monthly lease price for a 10 Mbps Ethernet circuit in the U.S. Canada was $722 – a decline of more than 42 percent that brought the North American figure much closer to the also-revised figures for Oceana ($531) and Western Europe($525).

TeleGeography's pricing data set reflects carriers' actual local access purchases during each period, so circuit mix and geographic coverage varies considerably from period to period. The volatility of this data over just a six month period from the first half of 2014 to the second half of 2104, and the extent to which North American prices closed the gap on which Windstream relies, underscore the danger inherent in drawing any conclusions based on static data from nearly two years ago.

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[239] *Id.* at 53 (quoting TeleGeography, *Local Access Pricing Service, H1 2014 Local Access Market Summary* at 3).

[240] TeleGeography, *Local Access Pricing Service, H2 2014 Local Access Market Summary* at 3.

Finally, the real import of the TeleGeography report on which Windstream relies should not be lost, as it *agrees* with other industry analyses demonstrating that, generally, rates for Ethernet services are in steep decline, and are expected to continue to decline going forward: "While price trends vary considerably by metro, the general trend is down. As more competitors enter each market and light new buildings or new equipment allows for more cost effective transmission access, providers will lower prices. Going forward the general trend of access pricing is expected be towards cheaper and higher capacity circuits."[241]

3. All Major Providers of Ethernet Service Are Currently Subject to Non-Dominant Regulatory Treatment.

Competitive providers acknowledge that all major providers are now subject to non-dominant carrier regulation in their provision of Ethernet services. For example, Windstream states that, based on the various forbearance petitions filed by each of the major ILECs, "the Commission has eliminated all dominant carrier regulation of the largest incumbents' then-existing and specified packet-switched special access services," including Verizon, AT&T, CenturyLink and Frontier.[242] Accordingly, each of the largest ILECs, as well as competitive providers (who of course were never subject to dominant carrier regulation)are regulated in the same fashion in their provision of Ethernet services. The Commission should therefore reject any suggestion that it would be beneficial to rescind its prior broad grant of forbearance regarding ILEC packet-switched special access services, and re-regulate in particular ILEC

[241] TeleGeography, *Local Access Pricing Service, H1 2014 Local Access Market Summary* at 19; *see also* TeleGeography, *Local Access Pricing Service, H2 2014 Local Access Market Summary* at 12 ("[C]ustomers can expect prices in key metro areas to be under significant pressure, with most key metros posting a two year CAGR decline of 10 to 50 percent between H1 2012 and H1 2014.").

[242] Windstream Comments at 88.

Ethernet services, in order to harmonize a supposed "patchwork" of regulatory obligations regarding ILEC special packet-switched special access services.[243]

The Commission also should reject other CLEC proposals to reregulate Ethernet services, including Windstream's request that the Commission make permanent the interim condition imposed in the *Technology Transitions* proceeding[244] on ILEC discontinuance under Section 214 of TDM wholesale access.[245] That condition, which was imposed pending completion of the special access proceeding, required the ILEC to make available IP wholesale access to competitors at rates, terms and conditions reasonably comparable to the discontinued TDM service. The rationale for Windstream's request is the supposedly excessive pricing for Ethernet services, relative to TDM services.[246] As discussed above, however, those statistics are grossly misleading. The increasing competition in packet-switched dedicated services is rapidly reducing rates. There is therefore no reason to make permanent a comparable Ethernet access condition that was imposed pending resolution of the special access proceeding. There is even less reason to extend this condition beyond the discontinuance context, as Windstream also requests, and require ILECs to provide IP wholesale access at TDM rates, terms and conditions in all buildings that (in the CLECs' view) lacks other competitive access.[247] The only impact

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[243] *See, e.g.*, Joint CLEC Comments at 59-60. CenturyLink separately addresses the many legal frailties inherent in rescinding forbearance and re-regulating such services on a dominant carrier basis in Section IV, *infra*.

[244] *Technology Transitions Report and Order*, 30 FCC Rcd at 9443-71 ¶¶ 131-80.

[245] Windstream Comments at 83-87.

[246] *See id.* at 84-86.

[247] *See id.* at 87-88.

that such a requirement might have is to delay the ILEC transition to all-IP networks. In fact, given current trends, this superfluous, onerous condition should be eliminated now.

The Commission also should reject requests that it use Section 251(c)(4) to mandate that wholesale services be sold at a discount to retail services sufficient to reflect all cost savings and prevent price squeezes.[248] The focus of the CLECs' concern is on "packet-switched wireline broadband transmission services," such as "Ethernet."[249] Again, given the increasing competition for Ethernet services and declining rates, there is no reason to impose this type of pricing straitjacket on Ethernet special access pricing. Such a requirement is particularly inappropriate in light of all of the alternative sources of access, including cable facilities, available to entities seeking to provide competitive Ethernet special access services.

4. Non-Market-Based Rate Reductions Would Hamper Deployment of Next-Generation Ethernet Services.

"When multiple carriers make abundant investments in sunk network facilities, competitive outcomes can be assured, and there is no economic basis for singling out ILEC special access services for regulation."[250] The Commission has correctly recognized in a number of different contexts that unnecessary regulation chills investment.[251] And Section 706(a) of the

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[248] *See id.* at 68-77; Joint CLEC Comments at 67.

[249] Windstream Comments at 69-70.

[250] Initial Econometric Analysis at 8.

[251] *See, e.g.*, *Petition of AT&T, Inc. for Forbearance from Title II and Computer Inquiry Rules with Respect to its Broadband Services*, Memorandum Opinion and Order 22 FCC Rcd 18705, 18723 ¶ 29, 18732 ¶ 49 (2007), *aff'd sub nom. Ad Hoc Telecomms. Users Comm. v. FCC*, 572 F.3d 903 (D.C. Cir. 2009) (unnecessary regulatory requirements "impose significant unnecessary transaction costs [an ILEC's] broadband business" and discourage investment, and "regulation that constrains incentives to invest in and deploy the infrastructure needed to deliver broadband services is not in the public interest"); FCC, *Connecting America: The National Broadband Plan*

1996 Telecommunications Act in fact affirmatively requires the Commission to consider regulatory forbearance and other methods to remove barriers to advanced next generation infrastructure investment.[252] In this context, there is no justification for disparate regulation of ILEC Ethernet services, and subjecting only ILEC services to regulation would both distort competition going forward, and undercut the incentive for ILECs to invest in the deployment of next-generation Ethernet services.

B. Adoption of CLEC Proposals to Further Regulate Ethernet and Other Next-Generation Services Would Be Unlawful.

The CLECs' regulatory proposals are doomed not only by the absence of any sound policy rationale, but also by the lack of any lawful basis to impose these measures even if the Commission were inclined to do so.

1. The Commission May Not Reverse Prior Forbearance Grants or Take Action Requiring Such Reversal.

Following the grant of Verizon's enterprise broadband forbearance petition by operation of law in 2006,[253] the Commission issued a series of orders forbearing from dominant carrier regulation and certain *Computer Inquiry* rules with respect to the enterprise broadband services

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at 59 (Mar. 2010), *available at* https://apps.fcc.gov/edocs public/attachmatch/DOC-296935Al .pdf (outdated "regulations can have a number of unintended consequences, including siphoning investments away from new networks and services"); *Petition of USTelecom for Forbearance Pursuant to 47 U.S.C. § 160(c) from Enforcement of Obsolete ILEC Legacy Regulations*, Order, 30 FCC Rcd 13272 (2015) (Statement of Commissioner Ajit Pai) ("[E]very dollar spent on . . . outdated, legacy regulations . . . is a dollar that can't be spent deploying next-generation infrastructure.").

[252] 47 U.S.C. § 1302(a).

[253] *Verizon Telephone Companies' Petition for Forbearance from Title II and Computer Inquiry Rules with Respect to Their Broadband Services Is Granted by Operation of Law*, Public Notice, WC Docket No. 04-440 (Mar. 20, 2006), *pet. for review denied sub nom. Sprint Nextel Corp. v. FCC*, 508 F.3d 1129 (D.C. Cir. 2007) ("*Sprint Nextel*").

provided by AT&T, ACS of Anchorage, Embarq, Frontier and Qwest.[254] More recently, CenturyLink's similar footprint-wide forbearance request was granted by operation of law.[255]

In granting such forbearance, the Commission found that dominant carrier regulations, including tariffing and entry and exit requirements, are not necessary to ensure just, reasonable and nondiscriminatory enterprise broadband charges and practices, and that their elimination would enable ILECs to negotiate customized service arrangements and respond more quickly to competing offers. The Commission therefore concluded that the action taken in the *Enterprise Broadband Forbearance Orders* would "enable competition in the broadband market [and] encourage investment in, and development of, new broadband services[.]"[256] As discussed above and in CenturyLink's initial comments, that is exactly what has occurred. Ethernet prices

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[254] *See Petition of AT&T Inc. for Forbearance Under 47 U.S.C. § 160(c) from Title II and Computer Inquiry Rules with Respect to Its Broadband Services*, Memorandum Opinion and Order, 22 FCC Rcd 18705 (2007) ("*AT&T Enterprise Broadband Forbearance Order*"), *aff'd sub nom. Ad Hoc Telecomms. Users Comm. v. FCC*, 572 F.3d 903 (D.C. Cir. 2009) ("*Ad Hoc*"); *Petition of ACS of Anchorage, Inc. Pursuant to Section 10 of the Communications Act of 1934, as Amended (47 U.S.C. § 160(c)), for Forbearance from Certain Dominant Carrier Regulation of Its Interstate Access Services, and for Forbearance from Title II Regulation of Its Broadband Services, in the Anchorage, Alaska, Incumbent Local Exchange Carrier Study Area*, Memorandum Opinion and Order, 22 FCC Rcd 16304 (2007); *Petition of the Embarq Local Operating Companies for Forbearance Under 47 U.S.C. § 160(c) from Application of Computer Inquiry and Certain Title II Common-Carriage Requirements; Petition of the Frontier and Citizens ILECs for Forbearance Under Section 47 U.S.C. § 160(c) from Title II and Computer Inquiry Rules with Respect to Their Broadband Services*, Memorandum Opinion and Order, 22 FCC Rcd 19478 (2007); *Qwest Petition for Forbearance Under 47 U.S.C. § 160(c) from Title II and Computer Inquiry Rules with Respect to Broadband Services*, Memorandum Opinion and Order, 23 FCC Rcd 12260 (2008). These Comments refer to these orders collectively as the *Enterprise Broadband Forbearance Orders*.

[255] *See CenturyLink's Petition for Forbearance from Dominant Carrier Regulation and the Computer Inquiry Tariffing Requirement with Respect to its Enterprise Broadband Services Is Granted by Operation of Law*, News Release, WC Docket No. 14-9 (Mar. 16, 2015).

[256] *See, e.g.*, *AT&T Enterprise Broadband Forbearance Order*, 22 FCC Rcd at 18723 ¶ 29.

have plummeted, and CLECs and cable operators have become Ethernet powerhouses, making use of their own facilities, unbundled copper loops purchased from ILECs at bargain-basement TELRIC rates, and third-party dedicated services.

Now, CLECs request that the Commission halt this progress in competitive broadband deployment and bring about a massive competitive asymmetry, favoring some of the largest Ethernet providers in the nation, by reversing all of these forbearance grants[257] or by granting the Ad Hoc Reverse Forbearance Petition seeking the same outcome.[258] This step is a necessary predicate to various outcomes sought by CLECs here, including the reimposition of dominant carrier regulation on Ethernet and other high-capacity packet-switched special access services provisioned by ILECs, reapplication of price cap regulation on such offerings, elimination or restriction of pricing flexibility for those services, the application of other mandates concerning how these products are offered,[259] and adoption of the Windstream-proposed mandate that "all Ethernet wholesale services" in any building lacking alternative wholesale access be made available at rates, terms and conditions reasonably comparable to equivalent TDM services.[260] The Commission, however, has no power to reverse forbearance, which is granted by Congress,

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[257] *See, e.g.*, Windstream Comments at 88-91; Sprint Comments at 86.

[258] *See* Sprint Comments at 86 (citing Petition of Ad Hoc Telecommunications Users Committee, BT Americas, Cbeyond, Computer & Communications Industry Association, EarthLink, MegaPath, Sprint Nextel, and tw telecom to Reverse Forbearance from Dominant Carrier Regulation of Incumbent LECs' Non-TDM-Based Special Access Services, WC Docket No. 05-25 (filed Nov. 2, 2012) ("Ad Hoc Reverse Forbearance Petition")).

[259] *See* Windstream Comments at 98-102; Sprint Comments at 80-86; Joint CLEC Comments at 64-67.

[260] *See* Windstream Comments at 87-88. Windstream seeks such relief irrespective of and in the absence of any discontinuance of TDM wholesale services. *Id.* at 87. Thus, the requested relief cannot be justified as a condition of discontinuance under Section 214 or authorized by that provision.

not by the Commission, even when the agency issues an order finding that the Section 10 criteria have been met.

Section 10 of the Act directs that the Commission "shall forbear" from application of a regulation or statutory provision if it determines that the three-part test in Section 10 is satisfied.[261] Thus, Section 10 "requires" the Commission to forbear if the statutory criteria are met.[262] Consistent with its deregulatory bent, Section 10 imposes strict deadlines for Commission action on a forbearance petition, which, if missed, result in the requested forbearance being "deemed granted."[263]

In contrast, neither Section 10 nor any other provision in the Act gives the Commission authority to reverse a grant of forbearance. CLECs' presumption to the contrary finds no support in Section 10's language or legislative history. Both the House and Senate reports accompanying the 1996 Act confirm that Congress intended for the Commission to use the forbearance provision to eliminate unnecessary regulation, with no expectation that it would later re-impose it. According to the House Report, the House Commerce Committee anticipated that the forbearance authority in the House bill "will be a useful tool in *ending* unnecessary regulation."[264] As stated in the accompanying Senate Report, the forbearance statute permits the Commission "to reduce the regulatory burdens on [a] telephone company when competition

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[261] 47 U.S.C. § 160(a).

[262] *AT&T v. FCC*, 452 F.3d 830, 832 (D.C. Cir. 2007).

[263] *Id.* § 160(c).

[264] H.R. Rep. No. 104-204, pt. 1, at 89 (1995) (accompanying H.R. 1555) (emphasis added).

develops or when the Commission determines that relaxed regulation is in the public interest."[265] Thus, Section 10 was "[c]ritical to Congress's deregulation strategy."[266]

Notably, the requested reversal would reimpose statutory requirements – namely, Sections 203 and 214 – as well as Commission rules.[267] Whenever forbearance from a statutory provision is granted, either by Commission decision or by operation of law, the provision is "extinguish[ed]" as to the affected certain parties and services.[268] And it is "Congress," not the Commission, that "ma[kes] the decision . . . to 'grant' forbearance *whenever the Commission 'does not deny' a carrier's petition.*"[269] This is so whether Commission affirmatively finds that the forbearance criteria are met or does nothing by the deadline: In both those cases, the agency "does not deny" the petition, and Congress is deemed to have granted it. As such, in order to override this statutory nullification, the Commission would somehow have to "re-enact" Section 203's tariff obligations and Section 214's dominant-carrier discontinuance requirements in the context of ILEC enterprise broadband services.

The Commission's authority simply cannot be stretched that far. The Commission is a regulatory agency that must operate within the confines of its enabling statute, rather than its

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[265] S. Comm. on Commerce, Sci. and Transp., *Telecommunications Competition and Deregulation Act of 1995*, S. Rep. 104-23, at 5 (1995) (Comm. report on S. 652).

[266] *AT&T*, 452 F.3d at 832.

[267] *See, e.g., AT&T Enterprise Broadband Forbearance Order*, 22 FCC Rcd at 18706 ¶ 1 n.5 (granting forbearance from the requirements contained in Sections 203 and 214 (as it relates to dominant carriers), as well as certain sections of the Commission's rules).

[268] *See Sprint Nextel*, 508 F.3d at 1132 ("Congress ma[kes] the decision to extinguish [the relevant provisions] by operation of law" when forbearance is deemed granted).

[269] *Id.* (emphasis added).

"own conception of how the statute should be rewritten in light of changed circumstances."[270] The extraordinary decision to re-imposing statutory requirements that have been extinguished pursuant to Section 10 "must come from Congress[.]"[271] Congress conferred on the Commission the power to negate statutory provisions in response to forbearance petitions, but not the corresponding power to re-enact such provisions.[272] The Commission also lacks authority to re-impose the same requirements by rule or order. Section 4(i) provides the Commission authority to make rules and regulations that are "not inconsistent with this Act."[273] A Commission rule or order attempting to re-implement an extinguished statutory requirement would clearly be inconsistent with the Act and therefore *ultra vires*.[274]

Although the Commission has suggested that it can revisit a grant of forbearance,[275] it has not explained the basis for its authority to re-impose provisions that were enacted by Congress. Similarly, while the D.C. Circuit stated that the Commission's forbearance decisions in the

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[270] *See MCI v. FCC*, 765 F.2d 1186, 1195 (1985) (finding that the pre-1996 Act Commission lacked authority to "command that common carriers not file tariffs").

[271] *Id.*

[272] *See Immigration and Naturalization Serv. v. Chadha*, 462 U.S. 919 (1983) (only Congress can enact laws).

[273] 47 U.S.C. § 154(i).

[274] *See FCC v. Midwest Video Corp.*, 440 U.S. 689 (1979) (rejecting Commission's attempt to impose access obligations on cable providers because such obligations would be inconsistent with Congress' direction not to treat broadcasters as common carriers); *EchoStar Satellite v. FCC*, 2013 U.S. App. LEXIS 913 *14, 18 (Jan. 15, 2013) (refusing "to interpret ancillary authority as a proxy for omnibus power limited only by the FCC's creativity in linking its regulatory actions to the goal of commercial availability of navigations devices" and finding the challenged rules *ultra vires*).

[275] *See, e.g., AT&T Enterprise Broadband Order*, 22 FCC Rcd at 18723 n.120.

Enterprise Broadband Forbearance Orders are not "chiseled in marble,"[276] it has not held that the Commission can reverse those forbearance grants, and that issue was not even before it. Rather, in upholding the Commission's elimination of dominant carrier regulation in this context, the court noted the Commission's intent to "address, on an industry-wide basis, general concerns about discriminatory practices by ILECs with respect to their special access lines."[277] Given the "broader public debate over this issue," as well as the pending special access proceeding, the court found that "*Congress* and the FCC will be able to reassess as they reasonably see fit based on changes in market conditions, technical capabilities, or policy approaches to regulation in this area."[278] There is no plausible reading under which the court was conferring on the Commission the authority to resuscitate extinguished statutory provisions; rather, it was recognizing the obvious point that the agency would play a role in implementing any legislation passed by the Congress.

Accordingly, the Commission has no power to reverse any of its prior enterprise broadband forbearance grants or to impose any regulation of the rates, terms or conditions of Ethernet or other enterprise broadband services provided by the ILECs securing such forbearance grants, including Windstream's request that Ethernet wholesale services in any building lacking alternative wholesale access be made available at rates, terms and conditions reasonably comparable to equivalent TDM services. Such regulation would violate the prior forbearance

[276] *Ad Hoc*, 572 F.3d at 911.

[277] *Id.*

[278] *Id.* (emphasis added).

grants and thus would be *ultra vires* in the absence of Congressional action authorizing such regulation.

2. Section 251(b)(1) Does Not Authorize the Wholesale Pricing Obligation Sought by Windstream.

Windstream's request that Section 251(b)(1) be reinterpreted to require that any "wholesale" service rates never exceed rates for comparable retail transmission services[279] is not authorized by that provision. Section 251(b)(1) includes no wholesale pricing requirement.

Section 251(b)(1) imposes on all LECs "the duty not to prohibit, and not to impose unreasonable or discriminatory conditions or limitations on, the resale of its telecommunications services."[280] On its face, the provision says nothing about the rate at which a service may be offered to the wholesale market. Windstream argues that setting a price for a wholesale dedicated service that is higher than the comparable retail transmission service constitutes an "unreasonable or discriminatory condition[] or limitation[] on[] the resale of" that service.[281] But the Commission has previously (and definitively) rejected this proposition. It confirmed in the 1996 *Local Competition Order* that "section 251(b)(1) clearly omits a wholesale pricing requirement."[282] That holding was reaffirmed in the *Qwest Omaha Forbearance Order*, which

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[279] *See* Windstream Comments at 60-68.

[280] 47 U.S.C. § 251(b)(1).

[281] Windstream Comments at 60. Windstream also argues, *id.*, that such pricing violates Section 51.603(b) of the Commission's rules, which requires LECs to "provide services to requesting . . . carriers for resale that are equal in quality [and] subject to the same conditions . . . that the LEC provides these services to others, including end users." 47 C.F.R. § 51.603(b).

[282] *Implementation of the Local Competition Provisions in the Telecommunications Act of 1996*, Report and Order, 11 FCC Rcd 15499, 15981 ¶ 976 (1996) (subsequent history omitted).

held that "section 251(b)(1) has no wholesale pricing requirement."[283] Windstream's attempt to bootstrap a wholesale pricing requirement from Section 251(b)(1) must be rejected.[284]

3. There Is No Lawful Basis for Requiring ILECs to "Unbundle" Integrated Information Services.

Nor should the Commission credit Windstream's concern that ILECs will use "bundled" services to evade any resale obligations that actually apply.[285] As an initial matter, there is no basis to believe that ILECs are bundling services in order to evade lawful obligations. In fact, Windstream's complaint rests on the mistaken premise that CenturyLink's "Fiber+" service is one such offering.[286] Contrary to Windstream's description, Fiber+ is not merely a collection of different services packaged together. Rather, it is an integrated information service that is not subject to a resale obligation. Fiber+ customers select from among an assortment of information-service functionalities – primarily an enterprise-grade, non-mass-market broadband Internet access offering, as well as a suite of cloud-based applications (with features ranging from web hosting to online data backup to e-mail to a variety of online account management tools), voice over Internet Protocol ("VoIP"), and even managed virtual private network ("VPN") functionalities. Critically, Fiber+ does *not* include a separate offering of transmission. Rather, customers receive transmission capacity *only* in conjunction with the various

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[283] *Petition of Qwest Corp. for Forbearance Pursuant to 47 U.S.C. § 160(c) in the Omaha Metropolitan Statistical Area*, Memorandum Opinion and Order, 20 FCC Rcd 19415, 19460 ¶ 89 (2005), *aff'd sub nom. Qwest Corp. v. FCC*, 482 F.3d 471 (D.C. Cir. 2007).

[284] Windstream goes on at length, *id.* at 63-65, to elaborate on its theory by asserting that carriers should not be allowed to avoid this manufactured wholesale pricing obligation by offering the service at issue with information service capabilities, but there is no obligation to avoid.

[285] Windstream Comments at 63-65.

[286] *Id.* at 65.

information-processing capabilities described above and cannot purchase Ethernet (or other) connectivity on its own. These processing capabilities thus are not just "add-on" services packaged with a transmission service[287] – they *are* the service. As such, Fiber+ and services like it "inextricably intertwine" information processing and transmission precisely as envisioned by the Commission's precedent and thus are information services to which no resale obligation can attach.[288] Windstream's misuse of select marketing materials[289] to re-frame Fiber+ as some sort of a bundle ignores the Commission's long-time focus on what is actually being offered and how customers understand that offering.[290]

In the end, Windstream's argument effectively amounts to an unpersuasive effort to have the Commission rewrite decades' worth of precedent regarding the treatment of information services by ordering its disaggregation to create a severable telecommunications component for resale, without offering any basis in law or policy for that outcome. Congress has mandated the opposite outcome,[291] and the Commission has been careful not to disturb that balance.[292] The Commission should reject Windstream's request here as well.

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[287] Windstream Comments at 63.

[288] *Appropriate Framework for Broadband Access to the Internet Over Wireline Facilities*, Report and Order and Notice of Proposed Rulemaking, 20 FCC Rcd 14,853 ¶ 9 (2005) ("*Wireline Broadband Order*").

[289] Windstream Comments at 65.

[290] *Wireline Broadband Order*, 20 FCC Rcd at 14910-11 ¶ 104 ("[W]hether a telecommunications service is being provided turns on what the entity is 'offering . . . to the public,' and customers' understanding of that service."); *id.* at 14864-65 ¶ 16 ("[W]hat matters is the finished product made available through a service rather than the facilities used to provide it."); *Cable Modem Order*, 17 FCC Rcd at 4822-23 ¶¶ 38-39 (stating that "the classification of cable modem service turns on the nature of the functions that the end user is offered").

[291] *See, e.g.*, 47 U.S.C. § 153(51) ("A telecommunications carrier shall be treated as a common carrier under this Act only to the extent that it is engaged in providing telecommunications

4. The Commission Should Reject Windstream's Petition Seeking Unbundled Access to Fiber and IP-Based Enterprise Loops.

Windstream also asks the Commission to grant its pending petition for a declaratory ruling that ILECs' obligations to provide access to unbundled DS1 and DS3 capacity loops remain unaffected by any technological change in the facilities used to provide such capacity, whether from copper to fiber or from TDM to IP format.[293] CenturyLink and other carriers rebutted Windstream's attempt to hold back the IP transition in the relevant docket, and CenturyLink attaches and incorporates by reference its comments opposing the Windstream Petition.[294] As CenturyLink explained in those comments, grant of Windstream's Petition would require ILECs to maintain obsolete 1950's TDM technology, in the form of DS1 and DS3 unbundling, after transitioning to fiber loops and all-IP networks. Rather than take such a regressive step, the Commission should adhere to the approach adopted in the *Triennial Review*

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services …."); *Southwestern Bell Tel. Co. v. FCC*, 19 F.3d 1475, 1484 (D.C. Cir. 1994) ("In order to regulate an activity under [T]itle II of the Communications Act, the Commission must first determine whether the service is being offered on a common carrier basis.").

[292] *See, e.g.*, *Protecting and Promoting the Open Internet*, Report and Order On Remand, Declaratory Ruling, and Order, 30 FCC Rcd 5601, 5875-76 ¶ 565 (2015) (emphasizing that the Commission was not "compelling the common carriage offering of" broadband Internet access, but "simply identif[ying] as common carriage the [mass market] services that broadband Internet access service providers already voluntarily offer. . . .").

[293] *See* Windstream Comments at 77-83 (citing Windstream's Petition for Declaratory Ruling to Clarify that Technology Transitions Do Not Alter The Obligation of Incumbent Local Exchange Carriers to Provide DS1 and DS3 Unbundled Loops Pursuant to 47 U.S.C. § 251(c)(3), GN Docket No. 13-5 (filed Dec. 29, 2014) ("Windstream Petition")).

[294] *See* Comments of CenturyLink, WC Docket No. 15-1, GN Docket No. 13-5 (Feb. 5, 2015) ("CenturyLink DS1/3 Unbundling Comments"); Reply Comments of CenturyLink, WC Docket No. 15-1, GN Docket No. 13-5 (Mar. 9, 2015).

Order, which curtailed unbundling requirements for fiber loops.[295] The rationale for the *Triennial Review Order*'s decision to truncate and/or eliminate unbundling requirements for fiber-to-the-home loops – *i.e.*, that unbundling discourages fiber investment – applies equally to mass market and enterprise loops.[296]

As CenturyLink pointed out previously, by next year, DS1 and Dedicated Internet Access services combined will account for only three percent of the broadband marketplace for small and medium businesses,[297] the market that is the ostensible focus of Windstream's concern.[298] There is zero public interest in forcing ILECs to retrofit fiber networks with obsolete technology that no one will ever use. In fact, DSn equipment manufacturers have begun to discontinue the equipment used to provide these archaic services.[299] CenturyLink knows from its own experience as a CLEC outside its ILEC service territory that there are multiple alternatives to DS1 and DS3 loops, provided by both ILECs and CLECs. Indeed, as discussed above and in CenturyLink's opening comments, intermodal competition has expanded even since comments regarding the Windstream Petition were filed last year. The case against Windstream's backward-looking petition is even stronger, and it must be rejected.

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[295] *See Review of the Section 251 Unbundling Obligations of Incumbent Local Exchange Carriers*, Report and Order and Order on Remand and Further Notice of Proposed Rulemaking, 18 FCC Rcd 16978 (2003) (subsequent history omitted).

[296] CenturyLink DS1/3 Unbundling Comments at 6-19.

[297] *Id.* at 4.

[298] *See* Windstream Comments at 77-78, 82.

[299] CenturyLink DS1/3 Unbundling Comments at 4.

5. The Commission Has Not Provided Adequate Notice for Adoption of CLECs' Proposals.

The lack of APA-required notice for many of the CLECs' proposals stands as an independent bar to their adoption. Although the commenters sometimes assert some connection between their wide-ranging proposals and the subject of this proceeding – *i.e.*, possible revisions to the Commission's price cap and pricing flexibility rules – most of their requests wander far afield from any issues addressed in the *2012 Special Access Notice*. The Commission therefore may not consider or adopt those proposals, consistent with the APA, without issuing an NPRM formally requesting comment thereon.

A review of the potpourri of issues raised by CLECs demonstrates their irrelevance to this proceeding. In addition to the reverse forbearance-related requests, wholesale pricing request, and "reasonably comparable" wholesale access request discussed above, parties also request that the Commission ensure that wholesale services, including special access services, be sold at a discount to retail services sufficient to reflect all cost savings and prevent price squeezes.[300]

Even if these proposals to increase regulation of an increasingly competitive market were not otherwise flawed, the Commission has not provided adequate notice under the APA for any of them. The narrowly-focused *2012 Special Access Notice* requests comment on proposals regarding the appropriate market analysis to determine whether price cap regulation and the pricing flexibility rules ensure just and reasonable ILEC special access rates[301] and, based on that

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[300] *See* Windstream Comments at 68-77; Joint CLEC Comments at 67.

[301] *2012 Special Access Notice*, 27 FCC Rcd at 16341-52 ¶¶ 58-79.

analysis, whether and how special access regulation should be changed.[302] Regarding the latter set of issues, the Commission asked whether and how price cap regulation of special access services and/or the pricing flexibility rules should be changed, particularly where they have not resulted in just and reasonable special access rates, and whether the ILECs' special access discount terms and conditions are reasonable.[303]

Given the narrow range of issues raised in the *2012 Special Access Notice*, the Commission could not adopt any of the wide-ranging grab-bag of CLEC proposals without further notice.[304] The APA requires an agency to "make its views known to the public in a concrete and focused form so as to make criticism or formulation of alternatives possible"[305] and to "describe the range of alternatives being considered with reasonable specificity."[306] Otherwise, the "opportunity to comment is meaningless."[307] Here, the *2012 Special Access Notice* "ha[s] not so much as hinted" that CLEC proposals touching on many matters wholly unrelated to possible modifications to price cap regulation and the pricing flexibility rules "[is] the objective of the rulemaking."[308] Adoption of any of these proposals is prohibited by the APA, which forbids "agencies to use the rulemaking process to pull a surprise switcheroo on

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[302] *Id.* at 16352-56 ¶¶ 80-93.

[303] *Id.*

[304] *See Allina Health Servs. v. Sebelius*, 746 F.3d 1102, 1110 (D.C. Cir. 2014) ("deficient notice is a 'fundamental flaw' that almost always requires vacatur"); 5 U.S.C. § 706(2)(D).

[305] *HBO, Inc. v. FCC*, 567 F.2d 9, 36 (D.C. Cir. 1977) (per curiam).

[306] *Small Refiner Lead Phase-Down Task Force v. EPA*, 705 F.2d 506, 549 (D.C. Cir. 1983).

[307] *HBO*, 567 F.2d at 35.

[308] *Council Tree Communications, Inc. v. FCC*, 619 F.3d 235, 253-54 (3d Cir. 2010).

regulated entities."[309] Moreover, the "fact that some commenters actually submitted comments" containing these proposals "is of little significance" because the Commission "must *itself* provide notice of [any] proposal" ultimately adopted.[310] The Commission "cannot bootstrap notice from a comment."[311]

Application of these basic principles to the CLEC proposals precludes their adoption without further notice.

a. The *Notice* Does Not Signal an Intention to Consider Reversing Prior Forbearance Grants or Otherwise Regulating Forborne Services.

Even if the Commission possessed the authority to reverse its prior forbearance grants, which it does not, such a drastic reregulation of Ethernet and other enterprise broadband services would certainly require further notice addressing that issue. Today, the ILECs that received forbearance from dominant carrier regulation are under no obligation to tariff the enterprise broadband services covered by the *Enterprise Broadband Forbearance Orders* and related default grants. Indeed, they are prohibited from doing so.[312] The Ad Hoc Reverse Forbearance Petition, referenced in Sprint's Comments, asks the Commission to re-impose these tariff obligations, by classifying "incumbent LECs as dominant in the provision of non-TDM-based special access services."[313] In addition, Ad Hoc urges the Commission to establish "pricing regulations (to be implemented via tariffs) and service quality regulations for incumbent LEC

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[309] *Environmental Integrity Project v. EPA*, 425 F.3d 992, 996 (D.C. Cir. 2005).

[310] *Association of Private Sector Colls. & Univs. v. Duncan*, 681 F.3d 427, 462 (D.C. Cir. 2012).

[311] *Small Refiner*, 705 F.2d at 549.

[312] *See, e.g.*, *AT&T Enterprise Broadband Forbearance Order*, 22 FCC Rcd at 18729 ¶ 42.

[313] Ad Hoc Reverse Forbearance Petition at 8 (cited in Sprint Comments at 86).

non-TDM-based special access services."[314] Setting aside the bar against unforbearance, such regulations could be imposed only through the Commission's normal rulemaking processes.

The Commission initially classified the BOCs and independent ILECs as dominant through rulemaking,[315] and later used its rulemaking authority to reclassify them as nondominant in the provision of in-region, interstate long-distance services.[316] Similarly, the D.C. Circuit has held that forbearance proceedings are informal rulemakings, albeit with less agency discretion than the typical informal rulemaking.[317] Thus, even if reverse forbearance were lawfully permitted, it would likewise need to be undertaken pursuant to a rulemaking, starting with adequate notice. Because the Commission did not release an NPRM in response to the Ad Hoc Reverse Forbearance Petition, it cannot consider this issue unless the *Notice* addressed it.

The *2012 Special Access Notice*, however, was silent on the issue. In fact, the Commission "ha[s] not so much as hinted" that consideration of whether the prior enterprise broadband forbearance grants should be reversed "[is an] objective of the [instant] rulemaking."[318] Whether and how price cap regulation, as applied to special access services, and/or the pricing flexibility rules should be modified to ensure reasonable special access rates with respect to unforborne services gives no hint of any consideration of whether forborne

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[314] *Id.*

[315] *Policy and Rules Concerning Rates for Competitive Common Carrier Services and Facilities Authorizations Therefore*, First Report and Order, 85 F.C.C. 2d 1, 22-24 ¶¶ 62-65 (1980) (subsequent history omitted).

[316] *Regulatory Treatment of LEC Provision of Interexchange Services Originating in the LEC's Local Exchange Area and Policy and Rules Concerning the Interstate, Interexchange Marketplace*, Order, 12 FCC Rcd 15756 (1997).

[317] *Verizon and AT&T, Inc. v. FCC*, 770 F.3d 961, 966-67 & n.7 (D.C. Cir. 2014).

[318] *Council Tree*, 619 F.3d at 253-54.

enterprise broadband services should be brought back under tariffing requirements, entry and exit regulation, and other aspects of dominant carrier regulation.[319] If forborne enterprise broadband services were brought back under dominant carrier regulation, they might then be treated like other ILEC special access services under price cap regulation and the pricing flexibility rules. A notice regarding how special access services generally should be regulated, however, hardly provides notice of whether the scope of services subject to such special access regulation should be expanded.[320] Such an "oblique" reference provides "insufficient" notice of the reverse forbearance issue.[321]

If anything, the *2012 Special Access Notice* made it clear that unforbearance was *not* under consideration here. The *2012 Special Access Notice* listed the enterprise broadband forbearance grants and then noted that, "as a result of" those forbearance grants, "the scope of services affected by [this docket had] narrowed considerably," removing forborne enterprise broadband services from the universe of offerings subject to this proceeding.[322] Nowhere did the *2012 Special Access Notice* suggest that the Commission would consider whether the "scope

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[319] At one point, the *2012 Special Access Notice* asks whether ILEC special access services should be relieved of dominant carrier regulation in competitive areas, *2012 Special Access Notice*, 27 FCC Rcd at 16353 ¶ 85, but that hardly gives notice of the possibility that all forborne enterprise broadband services might have to be brought back under dominant carrier regulation. *See International Union, United Mine Workers of Am. v. Mine Safety & Health Admin.*, 407 F.3d 1250, 1260 (D.C. Cir. 2005) (vacating rule because notice that agency was considering a "*minimum* air velocity" cap would not have caused "interested parties to realize that [it] would consider" imposing a "*maximum*-velocity cap") (second emphasis added).

[320] *See Daimler Trucks N. Am. LLC v. EPA*, 737 F.3d 95, 102 (D.C. Cir. 2013) (agency may not redefine a term when it has "neither stated nor suggested that [it] was contemplating amending the [definition].").

[321] *Duncan*, 681 F.3d at 462.

[322] *2012 Special Access Notice*, 27 FCC Rcd at 16323 ¶ 9.

of services" covered by this docket, and thus covered by any possible modification of the pricing flexibility rules, might be expanded to include the previously forborne services. Thus, even aside from the substantive bar addressed above, the Commission may not unforbear here, nor may it adopt any other proposals that would explicitly or implicitly require the reversal of prior enterprise broadband forbearance grants. As noted above, these include requests that the Commission reimpose price cap regulation on ILEC Ethernet and other packet-switched dedicated services and eliminate or greatly restrict pricing flexibility and certain terms and conditions placed on those services[323] and Windstream's request that "all Ethernet wholesale services" in any building lacking alternative wholesale access be made available at rates, terms and conditions reasonably comparable to equivalent TDM services.[324]

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[323] *See* Windstream Comments at 98-102; Sprint Comments at 80-86; Joint CLEC Comments at 64-67.

[324] *See* Windstream Comments at 87-88. Windstream seeks such relief irrespective of and in the absence of any discontinuance of TDM wholesale services. *Id.* at 87. This is a follow-up to Windstream's request, *id.* at 83-87, that the Commission make permanent the interim condition for ILEC discontinuance of TDM wholesale access under Section 214 that the ILEC make available wholesale access to competitors at rates, terms and conditions reasonably comparable to the discontinued TDM service, an interim condition that was imposed, pending resolution of the special access proceeding, in *Technology Transitions Report and Order*, 30 FCC Rcd at 9443-71 ¶¶ 131-80. Because the Commission provided notice, in *Ensuring Customer Premises Equipment Backup Power for Continuity of Communications*, Notice of Proposed Rulemaking and Declaratory Ruling, 29 FCC Rcd 14968, 15012-13 ¶ 110 (2014) ("*Technology Transitions Notice*"), of the reasonably comparable wholesale access requirement as a possible condition of Section 214 discontinuance, there has been adequate notice of Windstream's request to make that condition permanent, rather than effective only pending resolution of the special access proceeding. The Commission has provided no notice, however, of Windstream's further request to delink the reasonably comparable wholesale access requirement from any TDM discontinuance. The *Technology Transitions Notice* raised the issue only in the context of establishing conditions for the discontinuance of TDM services, not as a standalone requirement. *Id.* at 15006-15 ¶¶ 92-113. Both Windstream requests are discussed in Section IV.

b. The *2012 Special Access Notice* Gave No Hint That the Commission Might Consider the Application of Section 251 Resale Obligations.

The *2012 Special Access Notice* was not, as some CLECs seem to believe, a blunderbuss regulatory reform rulemaking. It addressed only whether and how price cap regulation and the pricing flexibility rules, as applied to special access services, might be modified in light of the record compiled regarding competition. It provided no indication that the Commission might consider expanding the scope or meaning of the Section 251(b)(1) wholesale requirement (*i.e.*, whether it requires that "wholesale" service rates never exceed rates for comparable retail transmission services),[325] or whether Section 251(c)(4) requires that "wholesale" services be sold at a discount to comparable retail transmission services that is sufficient to reflect all cost savings and prevent price squeezes.[326] In fact, nothing in the *2012 Special Access Notice* suggests that the Commission intended to consider *any* Section 251 obligations or any resale requirements, whether under Section 251 or any other provision. It addresses only how special access rates themselves should be regulated, not how those rates should relate to comparable retail service rates.

Moreover, the "fact that some commenters actually submitted comments" containing these proposals "is of little significance" because the Commission "must *itself* provide notice of [any] proposal" ultimately adopted.[327] Because the Commission "itself" has not provided notice

[325] *See* Windstream Comments at 60-68.

[326] *See* Windstream Comments at 68-77; Joint CLEC Comments at 67.

[327] *Duncan*, 681 F.3d at 462.

of the Section 251 resale issues raised by Windstream and the Joint CLEC Commenters, it may not adopt their proposals without further notice.

V. CENTURYLINK'S TERMS AND CONDITIONS ARE LAWFUL AND PROCOMPETITIVE

A. The Terms and Conditions Currently Under Investigation Are Lawful and Procompetitive.

Sprint's comments in this docket criticize several practices currently under consideration in the Wireline Competition Bureau's ongoing tariff investigation, including alleged shortfall penalties, early termination fees, and technology migration provisions.[328] In response to the *Designation Order*, CenturyLink submitted a white paper addressing these arguments and others. CenturyLink also attached the white paper to its initial comments in this proceeding. CenturyLink requests that the white paper be incorporated by reference into the instant record. CenturyLink also plans to file a rebuttal to responses to its Direct Case, as per the *Designation Order*, which it will likewise file in the instant docket.

B. Volume Discounts are Lawful and Procompetitive, and Do Not "Lock In" Demand.

For years, CLECs have complained about the percentage commitments in ILEC tariff plans, claiming that they "locked in" or "locked up" demand.[329] Given the mass exodus from these plans, CLECs now claim that tariff plans and contracts with standard volume commitments

[328] *See* Sprint Comments.

[329] *See, e.g.*, Joint CLEC Comments at 5; Sprint Comments at 31, 41, 66.

of the sort the Commission has repeatedly endorsed lock in demand as well.[330] These claims, too, lack merit.

The Commission has recognized the benefits of volume discounts for decades.[331] As the Commission observed 15 years ago, there is "a substantial body of precedent that promotional programs, volume discounts and other arrangements may be reasonable and non-discriminatory."[332] Accordingly, the Commission has authorized or acknowledged volume and term discounts in a wide variety of contexts, including long distance resale,[333] satellite services,[334] telephone number pooling administration,[335] CMRS resale,[336] and the provision of telecommunications services to schools and libraries that receive universal service support.[337]

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[330] *See, e.g.*, Joint CLEC Comments at 47, 63, 65, Appendix B (Declaration of Gary B. Black), Appendix C (Declaration of Gary B. Black).

[331] *Private Line Rate Structure and Volume Discount Practices*, 97 FCC 2d 923 ¶ 40 (1984).

[332] *Personal Communications Industry Association's Broadband Personal Communications Services Alliance's Petition for Forbearance For Broadband Personal Communications Services*, 13 FCC Rcd 16857, 16871 ¶ 29 (1998).

[333] *See, e.g.*, *Ryder Communications, Inc. v. AT&T Corp.*, 18 FCC Rcd 13603, 13604-05 ¶ 4 (2003); *AT&T Corp. v. Winback & Conserve Program, Inc.*, 16 FCC Rcd 16074, 16075 ¶ 3 n.5 (2001); *American Communication Services, Inc.*, 14 FCC Rcd 21579, 21605 ¶ 53 (1999).

[334] *See, e.g.*, *IDB Mobile Communications, Inc. v. COMSAT Corporation*, 16 FCC Rcd 11474, 11417-78 ¶ 7 n.28 (2001).

[335] *See, e.g.*, *The Commission Seeks Comments on the Thousands-Block Pooling Administrator Technical Requirements*, 16 FCC Rcd 3710, Appendix, § 4.2 (1999) ("The Respondent is strongly encouraged to offer a volume discount.").

[336] *See, e.g.*, *David S. Poole v. Michiana Metronet*, 15 FCC Rcd 9944, 9950 ¶ 16 (WTB 1999).

[337] *See, e.g.*, *Changes to the Board of Directors of the National Exchange Carrier Association, Inc.*, 14 FCC Rcd 18756, 18788-89 ¶ 53 n.176 (1999).

Of particular relevance here, nearly thirty years ago, the Commission permitted volume discounts with respect to private line services.[338] It has repeatedly announced its recognition that "volume . . . discounts as generally legitimate means of pricing special access facilities so as to encourage the efficiencies associated with larger traffic volumes."[339] The D.C. Circuit has concurred, holding that it would be difficult to justify regulation that "frustrat[es] Bell Operating Companies' attempts to maintain stable utilization rates" through the use of discount plans.[340] Indeed, the courts have consistently held that "bundled discounts are a common feature of our current economic system."[341] In doing so, they have cautioned that "we should not be too quick to condemn price-reducing bundled discounts as anticompetitive, lest we end up with a rule that discourages legitimate price competition."[342]

These core precepts have not lost any of their force. Discounts based on volume or volume commitments are, and should remain, lawful for the simple reason that they bring competitive benefits to customers. Moreover, they provide the carrier with the stability with

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[338] *Private Line Rate Structure and Volume Discount Practices*, 97 FCC 2d at 948 ¶ 39-40.

[339] *Transport Rate Structure and Pricing*, Fourth Memorandum Opinion and Order On Reconsideration, 10 FCC Rcd 12979 ¶ 13 (1995) (citing *Expanded Interconnection with Local Telephone Company Facilities*, Report and Order and Notice of Proposed Rulemaking, 7 FCC Rcd. 7369 ¶ 199 (1992)); *see also Access Charge Reform Price Cap*, Notice of Proposed Rulemaking, Third Report and Order, and Notice of Inquiry, 11 FCC Rcd 21354 ¶ 187 (1996) ("*Access Reform Order*") (volume and term "discounts should be permitted . . . because they encourage efficiency and full competition"); *Private Line Rate Structure and Volume Discount Practices*, 97 F.C.C. 2d 923 ¶ 40 (1984).

[340] *BellSouth Telecommc'ns Inc. v. FCC*, 469 F.3d 1052, 1056 (D.C. Cir. 2006).

[341] *Cascade Health Solutions v. PeaceHealth*, 515 F.3d 883, 905 (9th Cir. 2008), *vacated on other grounds*, 542 F.3d 668 (9th Cir. 2008); *accord Collins Inkjet Corp. v. Eastman Kodak Co.*, 781 F.3d 264, 273 (6th Cir. 2015); *LePage's Inc. v. 3M*, 324 F.3d 141 (3d Cir. 2003).

[342] *See Cascade*, 515 F.3d at 896 (referencing *Barry Wright Corp. v. ITT Grinnell Corp.*, 724 F.2d 227, 234 (1st Cir. 1983)).

respect to a future stream of revenue that provides the certainty and incentive to invest in facilities with high up-front costs.

VI. CONCLUSION

For the reasons set forth above and in CenturyLink's opening comments, the Commission should dismiss the persistently dour view of competition offered by CLECs and affirm what the data make clear: that the marketplace for DSn- and high-capacity business services is intensely competitive, to the substantial and enduring benefit of consumers and businesses. Accordingly, the Commission should reject continued CLEC calls for expansive regulation of these services and focus its efforts on developing a framework that will promote continued investment and deployment.

Respectfully submitted,

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February 19, 2016

EXHIBIT 1

REDACTED – FOR PUBLIC INSPECTION

DECLARATION OF JULIE BROWN AND DAVID WILLIAMS

1. My name is Julie Brown. My business address is 930 15th Street, Denver, Colorado, 80202. I am employed as a Director of Wholesale Pricing, Marketing and Training in CenturyLink's Wholesale Markets Group. In that capacity, I am responsible for all strategic and transactional pricing for data and voice products, including Metro Ethernet, within the Wholesale Markets group. I have been employed by CenturyLink and its predecessor companies for 15 years, holding positions in Wholesale Product and Pricing and Offer Management.

2. My name is David Williams. My business address is 930 15th Street, Denver, Colorado, 80202. I am employed as a Director of Product Management in CenturyLink's Wholesale Markets Group. In this position, I am responsible for all products sold by the Wholesale Markets Group. This includes all data, voice, access and local services. This covers Special Access, Metro Ethernet, MPLS, High Speed Internet (HSI) and Optical Wave Services (OWS). I have been employed by CenturyLink and its predecessor companies for 15 years.

3. In this declaration, we address a number of issues raised in the CLECs' initial comments in this proceeding: the way in which CenturyLink's DSn and Ethernet services compete head-to-head with cable providers' cable modem and Ethernet services, other CLECs' fiber- and copper-based Ethernet services, and the services of other new entrants such as utility companies; tough negotiations and falling prices for CenturyLink DSn and Ethernet services; Service Level Agreements (SLAs) and Class of Service (CoS); and CenturyLink's deployment of fiber to commercial buildings in its ILEC serving territory.

I. Competition with Cable Companies and Other CLECs.

4. CenturyLink has long provided DS1 and DS3 services across its ILEC footprint, primarily on a wholesale basis. Traditionally, these services were used to serve businesses of all

sizes that were seeking reliable connections to meet their communications needs, from Fortune 500 corporations in steel and glass towers to "mom and pop" dry cleaners and auto parts stores. More recently, the predecessor companies that now comprise CenturyLink began offering Ethernet and other packet-based services. In its legacy Qwest footprint, CenturyLink offers Metro Ethernet, which is its most commonly purchased Ethernet service. CenturyLink offers a comparable service, Ethernet Virtual Private Line (EVPL), in the legacy CenturyTel and Embarq territories.

5. Increasingly, customers are abandoning DSn services for ready alternatives. From January 2012 to December 2015, the number of DS1 special access circuits CenturyLink provided declined by 47 percent. Not surprisingly, many business customers have found that the 1.5 Mbps capacity of a DS1 is not sufficient for their business needs, and that there are a variety of services available that offer higher speeds at a lower price per megabyte, including Ethernet, business grade cable modem service, and fixed wireless service.

6. The alternative service chosen by a given customer depends on its needs and priorities, which vary significantly from customer-to-customer. For customers running mission-critical applications, reliability and performance are paramount. Such customers may seek services with the most stringent SLAs available. They may also choose to pay more for higher Class of Service parameters, particularly if they want to prioritize certain types of traffic carried over their local area networks. In contrast, customers who are seeking an Internet connection and motivated primarily by price are more likely to choose business-grade cable modem service or HSI service (so-called "best-efforts" services), which provide much higher speeds than DS1-based Internet service, for a lower price. While these business-grade services may not have the most stringent SLAs (or any SLAs at all), for some customers that is not important. All

customers want reliable services, but many are not willing to pay a premium for service guarantees or traffic prioritization that they don't need.

7. Given this ongoing migration from DSn services, non-ILEC providers have not been shy about promoting their broadband services as replacements for these TDM services.[1] CenturyLink routinely competes against non-cable CLECs, including Integra, Level 3, Windstream and Birch, which compete successfully in the special access marketplace. Nevertheless, CenturyLink views cable providers to be its primary special access competitors, given their expansive networks and rapid growth in business markets. CenturyLink competes against all the major cable companies, including but not limited to Comcast, Cox, Time Warner Cable, Charter and Bright House. Traditionally, these providers targeted small, single-location customers. But, they have steadily moved up-market to win business customers of all sizes, including multi-location customers and multi-tenant buildings, particularly through their Ethernet-over-fiber and Ethernet-over-HFC offerings, as well as best-efforts services.

8. Some of CenturyLink's most strategic customers now purchase from cable companies, rather than CenturyLink, based on price. One of these customers recently told CenturyLink that, when buying special access for a location served by both CenturyLink and a cable company, the cable provider wins most of the time. The customer further noted: "we are seeing cases where a customer wants a 10MB or 20MB service (both directions) which usually pushes us to an Ethernet solution with you and a 50/10 or 50/25 cable [modem] solution will give them the

[1] *See, e.g., Comcast Business: Internet Speed Comparison Chart; Approximate Download Timeframes* (comparing download times for Comcast's business-grade cable modem services to DS1 and DSL services), Comcast website, available at http://business.comcast.com/docs/default-source/Internet/internet_speed_comparison_chart.pdf?sfvrsn=2 (last visited Feb. 13, 2016).

needed speed. It is not really a completely symmetrical solution but they end up with 10/10 or 20/20 at a much lower cost point than Ethernet so they go with that solution."

II. Tough Negotiations and Falling Prices for CenturyLink DSn and Ethernet Services.

9. Given these competitive alternatives, CenturyLink has been forced to discount its DSn and Ethernet services and offer more favorable terms and conditions. In 2012, CenturyLink introduced a Revenue Discount Simplification Plan (RDSP), which provides special access customers additional discounts on DSn services, based on growing their total purchase of CenturyLink data services including DSn, Ethernet, Wavelength, MPLS and other packet-based services. Some RDSP customers have grown their monthly credits by 80% from the start of their RDSP while their revenue only grew 45% in that same time period. These additional credits are an enhancement to any other tariff plan discounts applicable to the customer's DSn circuits from the standpoint that all data services across all CenturyLink ILEC affiliates are counted to derive the credit. The RDSP also allows for ease of migration from DSn to Ethernet purchases or to other providers, although the customer may receive a lower credit if it buys fewer services from CenturyLink—similar to any other volume-based discount. Wholesale customers in the RDSP currently include **[BEGIN HIGHLY CONFIDENTIAL]** [redacted] **[END HIGHLY CONFIDENTIAL]**

10. CenturyLink also offers competitive rates for its Ethernet services. Those rates have fallen significantly over time. In 2013, CenturyLink's average revenue per unit (ARPU) for its five largest carrier customers for a 10 Mbps Metro Ethernet service was **[BEGIN HIGHLY CONFIDENTIAL]** [redacted] **[END HIGHLY CONFIDENTIAL]**per month. Two years later, that figure had fallen to **[BEGIN HIGHLY CONFIDENTIAL]** [redacted] **[END HIGHLY CONFIDENTIAL]**, a decline of **[BEGIN HIGHLY CONFIDENTIAL]** [redacted] **[END HIGHLY**

CONFIDENTIAL] percent. These rates primarily reflect those paid by wholesale customers, which account for approximately **[BEGIN HIGHLY CONFIDENTIAL]** [redacted] **[END HIGHLY CONFIDENTIAL]** of the revenues for CenturyLink's Metro Ethernet service.

11. The "rack rate" for a single month-to-month circuit of this capacity in CenturyLink's Rates and Service Schedule (RSS) is $757, but customers that commit to a longer term—of typically one to three years—receive substantial discounts. For example, the same circuit for a three-year term in the RSS is priced at $621 per month. Wholesale customers often negotiate even larger discounts. For example, **[BEGIN HIGHLY CONFIDENTIAL]** [redacted] **[END HIGHLY CONFIDENTIAL]** Given the construction necessary to deploy these services, CenturyLink's ability to earn a reasonable return on these investments if often far from certain, especially over a 3-year term.

12. These price declines have been necessary for CenturyLink to remain competitive. All of CenturyLink's special access customers—from the largest ILECs and wireless providers to more regional carriers—drive a hard bargain in negotiations for these services. In seeking lower rates, they point to the various alternatives available to them from other providers, often at lower prices and with free network-to-network interfaces (NNIs). For example, **[BEGIN HIGHLY CONFIDENTIAL]** [redacted] **[END HIGHLY**

CONFIDENTIAL] In recent negotiations, another major wholesale customer pointed to the array of non-ILEC Ethernet providers that it can and does use to obtain access to commercial buildings and wireless cell sites: cable companies, traditional CLECs, and power companies, such as Florida Power & Light. Beyond that, the wholesale customer noted the growing availability of dark fiber solutions. The result is that CenturyLink retains a shrinking share of the customer's access budget.

13. Given these dynamics, CenturyLink pays careful attention to the prices offered by competitive providers and reduces its standard and negotiated prices, as necessary, to reflect these competing prices. CLECs' Ethernet-over-copper services have especially put pressure on CenturyLink's prices for DSn and Ethernet services, as they are frequently the lowest in the marketplace. CLECs typically offer lower prices in buildings to which they have deployed Ethernet-over-copper services, presumably because of the low cost of the UNE loops used to provide these services. The presence of these services has caused CenturyLink to reduce its DSn and Ethernet prices repeatedly in its negotiations with wholesale and retail customers.

14. This is evident, for example, in CenturyLink's provision of Ethernet backhaul services to wireless providers. Over the past several years, CenturyLink has hundreds of millions of dollars to deploy fiber to thousands of cell sites to help wireless providers keep up with growing demand for wireless services. Due to competitive pressure, CenturyLink has repeatedly offered lower rates to try to retain as much of this business as it can, as wireless providers threaten to move their purchases to other providers. **[BEGIN HIGHLY CONFIDENTIAL]**

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CenturyLink's has bid on many wireless backhaul contracts for wireless cell sites, only to see the business go to other providers. Between 2010 and 2013, for example, CenturyLink lost **[BEGIN CONFIDENTIAL]** [redacted] **[END CONFIDENTIAL]** RFPs issued by wireless providers—just in the areas served by legacy Embarq and CenturyTel—covering approximately **[BEGIN CONFIDENTIAL]** [redacted] **[END CONFIDENTIAL]** cell sites, and costing approximately **[BEGIN CONFIDENTIAL]** [redacted] **[END CONFIDENTIAL]** in potential revenue for CenturyLink.

15. CenturyLink has particularly had mixed success in responding to Sprint's RFPs for wireless backhaul services. As part of Sprint's Network Vision project, CenturyLink submitted bids in response to multiple Sprint RFPs. Overall, CenturyLink submitted bids for approximately **[BEGIN CONFIDENTIAL]** [redacted] **[END CONFIDENTIAL]** cell sites, but won only **[BEGIN CONFIDENTIAL]** [redacted] **[END CONFIDENTIAL]** CenturyLink submitted two subsequent bids, with similar limited success. Throughout the process, Sprint made it clear that it was providing much of this business to providers other than CenturyLink. Thus, even with its continual price reductions, CenturyLink frequently loses opportunities to sell DSn, Ethernet and other packet-based services.

III. Service Level Agreements and Class of Service.

16. As noted, service quality guarantees are not always provided with special access services, such as Ethernet. In fact, CenturyLink does not even offer SLAs for the Metro Ethernet services it sells to wireline customers in the legacy Qwest ILEC footprint. That is the case even though

CenturyLink Metro Ethernet is used to serve businesses of all sizes, including enterprise customers. CenturyLink does offer Class of Service, as an option, for its Metro Ethernet service, but only **[BEGIN CONFIDENTIAL]** [redacted] **[END CONFIDENTIAL]** percent of Metro Ethernet circuits are sold with Class of Service. Thus, for the vast majority of special access customers, neither SLAs nor Class of Service is necessary to compete successfully.

IV. CenturyLink's Deployment of Fiber.

17. Each year, CenturyLink invests approximately $3 billion to upgrade its network to offer more capable services. Nevertheless, CenturyLink still provides most of its special access services over copper last-mile facilities, as it has deployed fiber to less than **[BEGIN HIGHLY CONFIDENTIAL]** [redacted] **[END HIGHLY CONFIDENTIAL]** commercial buildings in its ILEC footprint. This equates to only **[BEGIN HIGHLY CONFIDENTIAL]** [redacted] **[END HIGHLY CONFIDENTIAL]** percent of the 1.42 million commercial buildings in CenturyLink's footprint, and less than **[BEGIN HIGHLY CONFIDENTIAL]** [redacted] **[END HIGHLY CONFIDENTIAL]** percent of the 117,000 commercial buildings with 5 or more tenants in that area.

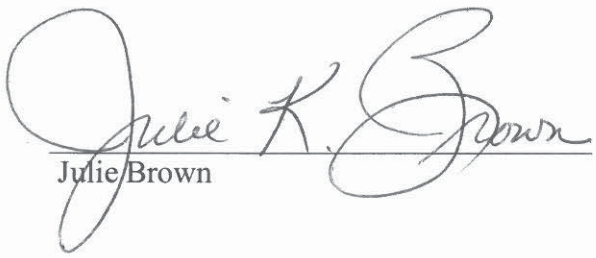
18. CenturyLink would like to provide fiber to all the buildings in its service territory, but it lacks the capital to do so. CenturyLink also can responsibly incur the substantial cost of extending fiber only if it has a reasonable expectation of obtaining a return on that investment. This usually means that CenturyLink must first win one or more customers in the building who are willing to make a significant revenue commitment over a number of years. With fierce competition and falling prices, it is impossible for CenturyLink to spread these last-mile deployment costs across its (declining) customer base. If CenturyLink does not recover those costs from the customers in that building, they will not be recovered at all.

19. CenturyLink's cost of deploying fiber to a building or other customer location is similar to that of Level 3, Windstream, or any other provider, even if CenturyLink already has copper to that location. It must trench, lay new conduit and run the fiber to the location. CenturyLink generally cannot use existing conduit to run fiber facilities unless the copper facilities are removed, which CenturyLink generally does not do, as those copper facilities are necessary to provide service to the location, at least until the fiber facilities are brought online. In other words, if a customer is upgrading from a copper-based DS1 to a fiber-based Ethernet service, it is necessary to have both the copper and fiber facilities in place simultaneously, to avoid an extended customer outage. Thus, initial fiber deployment to a location typically requires CenturyLink to install new conduit, like any other provider would. And, even in those cases where *existing* conduit can be used to deploy new fiber—for example, where CenturyLink has previously deployed fiber to the same location—CenturyLink's competitors can make use of that conduit on favorable regulated terms.

20. When CenturyLink deploys fiber to a commercial building, it also must obtain rights from the building owner, just like its competitors. Also just like its competitors, CenturyLink typically must install or have the building owner install fiber inside wiring to the end user. CenturyLink also has to obtain any necessary permits for conduit and fiber deployed in municipal rights of way. Thus, CenturyLink and other providers face essentially the same costs to deploy fiber.

I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge and belief.

Executed on: February 19, 2016



Julie Brown

I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge and belief.

Executed on: February 18, 2016

David G. Williams

EXHIBIT 2

DECLARATION OF MICHAEL BUGENHAGEN

1. My name is Michael Bugenhagen. My business address is 600 New Century Parkway, New Century, Kansas, 66031. I am employed as a Principal Architect in CenturyLink's Network organization. In that capacity, I am responsible for Architecture and Technology Analysis, including the evolution of CenturyLink's overall network architecture. Among other things, I am responsible for the strategic analysis and evolution of the handful of traditional cable systems owned and operated by CenturyLink. I have been employed by CenturyLink and its predecessor companies for 19 years. Prior to joining CenturyLink, I was employed by Sprint as the Primary Architect for Sprint's partnership with cable companies to provide VoIP services.

2. In this declaration, I discuss the inherent capability of Data over Cable Service Interface Specification (DOCSIS) 3.0 cable systems to provide Ethernet and other special access services, without the need for extensive network plant upgrades or other substantial investment by cable operators.

3. DOCSIS is a standard that permits, among other things, cable operators to provide high-bandwidth data services over existing cable systems. Launched in the late 1990s, DOCSIS 1.0 was initially used by cable operators to provide cable modem-based Internet access over their existing hybrid fiber-coaxial (HFC) infrastructure. More recent versions of DOCSIS, including DOCSIS 3.0, which was introduced in 2006, enable cable operators to deploy data services over the "cable" portion of their HFC infrastructure to provide Ethernet and other business data services. DOSIS 3.0/3.1 employ enhanced RF technologies that allow any cable operator to attain speeds of 100 to 300 Mbps, and even higher speeds over coaxial customer feeds by using channel-bonded cable modems. These technologies were developed to compete with fiber-to-the-premise services, at a much lower cost point, and are targeted to both business and residential

customers. Cable companies also use their HFC plant to deploy even faster Ethernet speeds to some commercial locations by constructing all-fiber last-mile facilities to those locations.

4. There generally is relatively little work or expense necessary to enable a DOCSIS 3.0 cable system with HFC facilities to provide Ethernet-over-HFC services. DOCSIS elements are generally designed and tested by CableLabs, the cable industry's research and development consortium, and available to all cable multiple-system operators (MSOs). A DOCSIS system configured to provide cable modem services and on-demand video programming includes two primary types of equipment: a cable modem termination system (CMTS), located at the cable head-end, and cable modems located at customer premises. The CMTS is a specialized router that manages traffic flow and converts Internet Protocol (IP) into Ethernet via the RF channels that are used by the cable modems. This is similar to a DSLAM's function in a DSL system, except that the DSLAM operates over a telephone copper pair, rather than a coaxial facility.

5. In 2006, CableLab's Business Services over DOCSIS (BSoD) initiative established specifications for CMTSs and cable modems, to enable a DOCSIS Layer-2 Virtual Private Network (L2VPN) feature for Ethernet and other business services.[1] These specifications were designed for business applications and allow cable operators to provide Service Level

[1] *See* CableLabs, *Data-Over-Cable Service Interface Specifications: Business Services Over DOCSIS; Layer 2 Virtual Private Networks*; CMB-SP-L2VPN-I14-150305, at 21-22 (rev. Mar. 5, 2015), *available at* http://www.cablelabs.com/wp-content/uploads/specdocs/CM-SP-L2VPN-I14-150305.pdf. ("This specification standardizes, within DOCSIS, the control and data plane operation of CMTSs and CMs [cable modems] in order to offer Transparent LAN Service to commercial subscriber enterprises. . . . [including] both port-based Ethernet Private Line (EPL) and VLAN-based Ethernet Virtual Private Line (EVPL) service over an MPLS network. In such a network, the CMTS can serve as a Provider Edge (PE) router and map DOCSIS service flows into MPLS pseudowires.")

Agreements and Quality of Service.[2] Thus, if a cable operator wishes to provide Ethernet-over-HFC services over a DOCSIS 3.0 system, it need not replace the CMTS, though it may choose to add higher capacity cards, if necessary to handle any additional capacity demands associated with the Ethernet services. Such card replacement can be accomplished in a matter of days, if not hours. Cable operators, of course, are already well accustomed to upgrading CMTS cards periodically, to keep up with growing bandwidth requirements of the cable modem services provided over their DOCSIS 3.0 systems.

6. From a strategic standpoint, most MSOs upgrade their cable systems to offer higher broadband speeds than their competitors. The reports generated by the FCC's Measuring Broadband America project, which tracks speeds provided by wireline Internet service providers, clearly show the growth of higher speed DOCSIS systems over time and that 100 Mbps broadband speeds are now commonly offered by MSOs.[3]

7. Assuming their coax plant is well maintained, a cable operator typically does not need to replace or upgrade its existing DOCSIS 3.0 HFC plant to provide Ethernet services. In general, MSOs already replaced their oldest coax plant, due to age and in order to meet DOCSIS 2.0/3.0 standards necessary to remain competitive.

8. A cable operator may also choose to deploy new customer premises equipment to customers subscribing to its Ethernet services, but even this may be unnecessary. At least some of the customer premises equipment currently available for business-grade cable modem services

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[2] *See id.* at 49 ("An operator may offer L2VPN services with Service Level Agreements (SLAs) inclusive of Quality of Service (QoS)," consistent with Metro Ethernet Forum specifications.).
[3] *See 2015 Measuring Broadband America Fixed Broadband Report: A report on Consumer Fixed Broadband Performance in the United States*, FCC, Table 1 (Dec. 30, 2015), *available at* *https://www.fcc.gov/reports-research/reports/measuring-broadband-america/measuring-broadband-america-2015#block-menu-block-4*.

is already Metro Ethernet Forum (MEF) 2.0 Certified, meaning it can be used to provide MEF 2.0 Certified Ethernet services, as well as cable modem services. CableLabs' L2VPN specification specifically contains settings to deliver carrier-grade metro Ethernet services.

9. Thus, a typical DOCSIS 3.0 cable system with HFC plant can be easily and quickly used to provide Ethernet-over-HFC services. Indeed, major cable operators have been doing so for more than three years.[4] In 2013, CableLabs released DOCSIS 3.1, which will enable speeds of up to 10 Gbps downstream and 1 Gpbs upstream.[5] Comcast began a live test of DOCSIS 3.1 late last year and announced plans to deploy it in several parts of the country by the end of 2016.[6] Once it is deployed, DOCSIS 3.1 can be used to provide gigabit-level Ethernet speeds without constructing all-fiber loops or undertaking other network plant upgrades.[7]

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[4] *See, e.g.*,*Comcast Meshes Ethernet with Docsis 3.0*, Light Reading, http://www.lightreading.com/ethernet-ip/ethernet-services/comcast-meshes-ethernet-with-docsis-30/d/d-id/700115 (Dec. 6, 2012).

[5] *See New Generation of DOCSIS Technology*, CableLabs website, *available at http://www.cablelabs.com/news/new-generation-of-docsis-technology/* (last visited Feb. 14, 2016).

[6] *See Comcast Begins Rolling Out DOCSIS 3.1-based gigabit home Internet*, ExtremeTech, *available at http://www.extremetech.com/extreme/220025-comcast-begins-rolling-out-docsis-3-1-based-gigabit-home-internet* (Dec. 29, 2015) (noting that because DOCSIS 3.1 "works with the coaxial-fiber cable infrastructure *already in place*."); *World's First Live DOCSIS 3.1 Gigabit Class Modem Goes Online in Philadelphia*, Comcast Blog, *available at http://corporate.comcast.com/comcast-voices/worlds-first-live-docsis-3-1-gigabit-class-modem-goes-online-in-philadelphia* (Dec. 22, 2015) (*Comcast Blog*).

[7] *See Comcast Blog* at 1 ("The beauty of DOCSIS 3.1 is that it is backwards compatible, so no digging up streets or backyards.").

I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge and belief.

Executed on: February 18, 2016

Michael Bugenhagen

EXHIBIT 3

REDACTED – FOR PUBLIC INSPECTION

DECLARATION OF CARLA STEWART

1. My name is Carla Stewart. My business address is 700 West Mineral Avenue, Littleton, CO 80120. I am employed as Vice President–Cost Management at CenturyLink. My organization selects and manages access providers for CenturyLink's non-ILEC affiliate, which operates across the country.

2. In this declaration, I respond to Level 3's and Windstream's declarations comparing the quality of the Ethernet services offered by cable companies with those of the ILECs and CLECs. Based on my ongoing experience as a purchaser of these wholesale services, I disagree with any suggestion that cable-provided Ethernet services are somehow inferior to, or less suitable for a typical end user than, Ethernet services provided by ILECs and CLECs. CenturyLink now routinely buys large quantities of fiber-based and hybrid fiber coax (HFC)-based Ethernet local access services from cable companies across the country, with class of service (CoS) parameters and service level agreements (SLAs).[1] I also explain in this declaration the important role of CLECs' Ethernet-over-copper services and CenturyLink's wholesale purchases from unaffiliated ILECs.

3. Like all providers, CenturyLink relies on access services provided by other carriers. When CenturyLink provides service to large, multi-location customers, for example, it frequently serves some of the customer's locations over CenturyLink facilities and other locations using access services purchased from wholesale providers. In my current role at

[1] As noted in my previous declaration, **[BEGIN HIGHLY CONFIDENTIAL]** [redacted] **[END HIGHLY CONFIDENTIAL]**

CenturyLink, I oversee the purchase of Ethernet local access services from all types of wholesale providers, including ILECs, such as AT&T and Verizon; CLECs, such as Level 3 and Windstream; and cable providers, such as Charter and Comcast.

4. As discussed in my declaration filed with CenturyLink's initial comments in this proceeding, CenturyLink launched an initiative in 2014 to reduce its access costs outside its ILEC footprint by aggressively seeking lower rates from a long list of non-ILEC access vendors. As part of this initiative, CenturyLink established and expanded wholesale arrangements with cable companies and other CLECs to obtain Ethernet local access to commercial buildings. This alternative access initiative has been highly successful, as CenturyLink purchases an increasing percentage of its Ethernet access connections from providers other than AT&T and Verizon. This success is mostly attributable to the Ethernet access that cable companies provide over their expansive and growing fiber and hybrid fiber coax (HFC) networks. In December 2015, **[BEGIN HIGHLY CONFIDENTIAL]** [redacted] **[END HIGHLY CONFIDENTIAL]**

5. Before buying service from any Ethernet access provider, including a cable company, CenturyLink undertakes a rigorous technical review of the provider's access services and requires the provider to address any concerns identified in this review. This review includes input from CenturyLink's engineers and technical product staff (including some who represent CenturyLink in the Metro Ethernet Forum), as necessary, to ensure that the access vendor's Ethernet services meet CenturyLink's minimum service specifications. For this reason, as well as cable providers' broad network reach and favorable pricing, CenturyLink is purchasing a

growing percentage of wholesale Ethernet services from cable providers.

6. In some locations, the wholesale Ethernet that CenturyLink purchases from cable companies is provided over fiber, and other times over HFC, depending on the facilities available and the needs of the end user customers. **[BEGIN HIGHLY CONFIDENTIAL]** [redacted] **[END HIGHLY CONFIDENTIAL]** Whether providing Ethernet over fiber or over HFC facilities, CenturyLink's cable access vendors furnish CenturyLink with MEF 2.0 Certified or Compliant Ethernet service (or its equivalent), with identified Classes of Service and associated SLAs guaranteeing performance characteristics, such as network availability, jitter, and latency.

7. *Class of Service*. Class of service (CoS) is a parameter used to differentiate Ethernet packets to give priority to certain types of traffic carried in a network, such as voice or video traffic. Some Ethernet access providers allow customers to buy higher levels of CoS—generally for a higher price—to enable the CoS designations on the customer's network to be recognized, on a packet-by-packet basis, when the customer's traffic is carried over the Ethernet provider's network. **[BEGIN HIGHLY CONFIDENTIAL]** [redacted] **[END HIGHLY CONFIDENTIAL]** In my experience, the lack of high or medium CoS does not a significant impact on our decision whether to buy from a particular access vendor, because most

customers decline to buy higher levels of CoS, even when they are available. In 2015, **[BEGIN HIGHLY CONFIDENTIAL]** [redacted] **[END HIGHLY CONFIDENTIAL]** of the total wholesale Ethernet circuits that CenturyLink purchased had low CoS, and only **[BEGIN HIGHLY CONFIDENTIAL]** [redacted] **[END HIGHLY CONFIDENTIAL]** had high.

8. *Service Level Agreements.* The cable vendors' SLAs are also comparable to those of ILEC vendors. For Ethernet services provided over fiber, cable vendors offer network availability SLAs of **[BEGIN HIGHLY CONFIDENTIAL]** [redacted] **[END HIGHLY CONFIDENTIAL]** which is as good, or better, than ILEC vendors' SLAs. **[BEGIN HIGHLY CONFIDENTIAL]** [redacted] **[END HIGHLY CONFIDENTIAL]** For latency, **[BEGIN HIGHLY CONFIDENTIAL]** [redacted] **[END HIGHLY CONFIDENTIAL]**

9. The cable vendors' SLAs for Ethernet-over-HFC services are typically (but not always) lower than those for their Ethernet-over-fiber services, but they still are comparable to those of ILEC access vendors. For network availability, for example, cable vendors have SLAs of **[BEGIN HIGHLY CONFIDENTIAL]** [redacted] **[END HIGHLY CONFIDENTIAL]** For jitter, **[BEGIN HIGHLY CONFIDENTIAL]** [redacted] **[END HIGHLY CONFIDENTIAL]** Similarly, for

latency, cable vendors offer **[BEGIN HIGHLY CONFIDENTIAL]** [redacted] **[END HIGHLY CONFIDENTIAL]**

10. As with CoS, SLA levels are more important to some end user customers than others. SLAs for jitter, for example, are immaterial to a customer unless it intends to use the service for a particularly jitter-intolerant application, which is not typically the case. Thus, for most of CenturyLink's end user customers, cable-provided Ethernet-over-HFC services (as well as Ethernet-over-fiber services) are indistinguishable in performance from the wholesale Ethernet services we purchase from ILECs and CLECs, which is why we now buy them so frequently. We use these cable-provided services to provide various types of enterprise services to our end user customers, including multiprotocol label switching (MPLS) services. We have also used cable-provided Ethernet services for federal government and other customers with demanding specifications. Cable vendors provide wholesale Ethernet-over-HFC services at symmetric speeds of up to 10 Mbps, which make them viable for **[BEGIN HIGHLY CONFIDENTIAL]** [redacted] **[END HIGHLY CONFIDENTIAL]** of our retail Ethernet customers.[2]

11. *Ethernet-over-Copper Services.* CenturyLink also buys Ethernet local access from CLECs using unbundled network elements (UNEs) to provide Ethernet-over-copper service, as well as those using their own fiber facilities. Since more than **[BEGIN HIGHLY CONFIDENTIAL]** [redacted] **[END HIGHLY CONFIDENTIAL]** of our wholesale Ethernet purchases are for speeds of 1 to 20 Mbps, these services are a good fit for many of our end user

[2] In 2015, **[BEGIN HIGHLY CONFIDENTIAL]** [redacted] **[END HIGHLY CONFIDENTIAL]** of the wholesale Ethernet circuits CenturyLink purchased were for speeds between 1 and 10 Mbps.

customers. And, where available, they frequently are the lowest-priced alternative. In bidding for RFPs—especially for customers with many small locations—CenturyLink sometimes provisions service to **[BEGIN HIGHLY CONFIDENTIAL]** [redacted] **[END HIGHLY CONFIDENTIAL]** of the locations using CLEC-provided Ethernet-over-copper services.

12. *Unaffiliated ILECs.* CenturyLink also purchases wholesale Ethernet services and other access services from unaffiliated ILECs. Through negotiation, CenturyLink has been able to obtain discounts to market rates in exchange for volume commitments, through hard-fought negotiations.

I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge and belief.

Executed on: February 19, 2016

Carla Stewart

Carla Stewart

EXHIBIT 4

Confidential Exhibit Redacted